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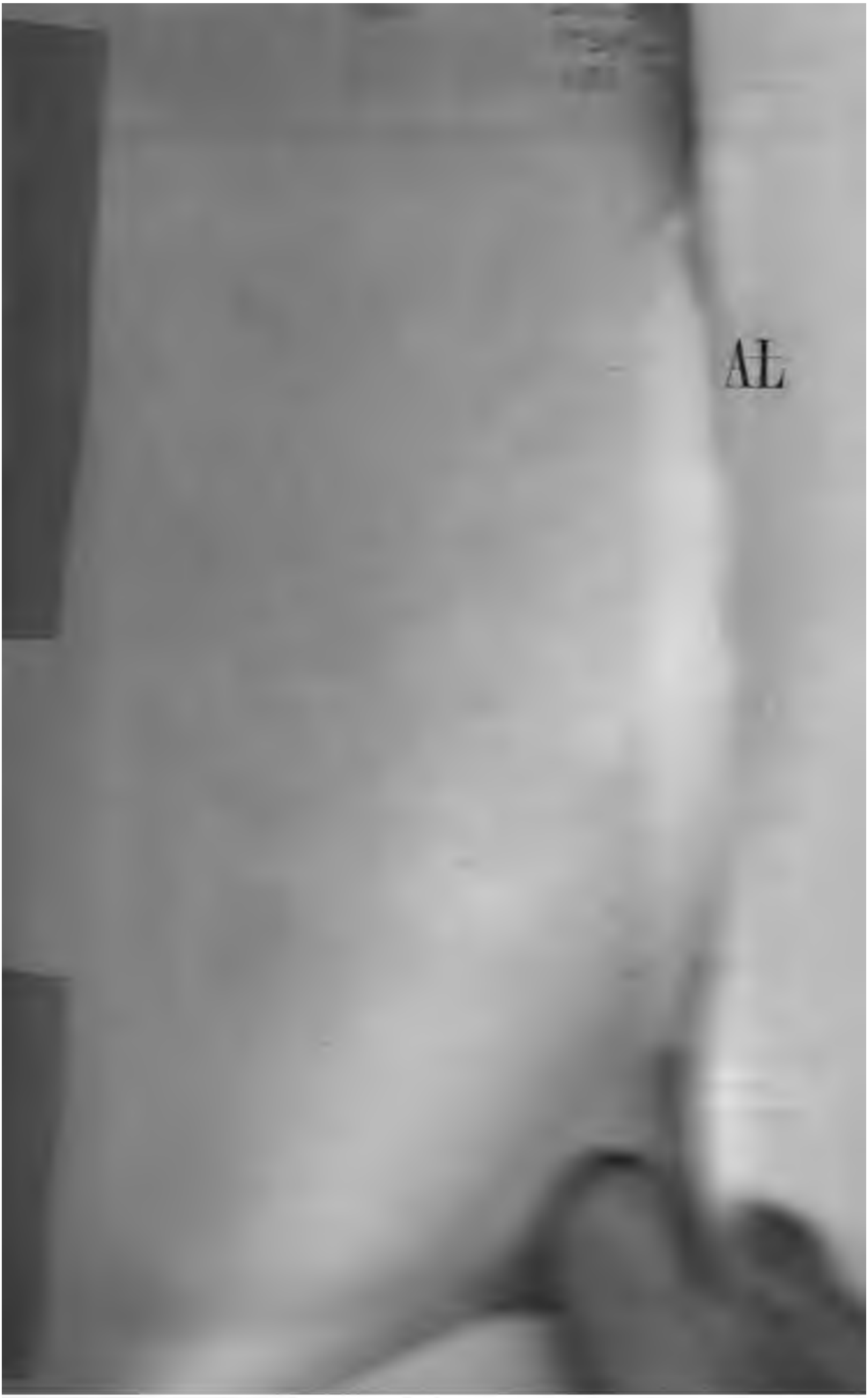
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THE
Maryland
and
VIRGINIA
MEDICAL AND SURGICAL
JOURNAL.

EDITORS.

J. B. McCAW, M. D., J. F. PEEBLES, M. D.,
RICHMOND. PETERSBURG.

CORRESPONDING EDITOR.
G. A. OTIS, M. D.

AMICUS SOCRATES, AMICUS PLATO, SED MAGIS AMICA VERITAS.

VOL. III.

RICHMOND:
COLIN AND NOWLAN, PRINTERS.
1854.

CONTRIBUTORS TO THIS VOLUME.

L. B. ANDERSON, M. D., *of Verdon, Hanover county, Va.*

J. N. BROOCKS, M. D., *of Richmond, Va.*

F. J. BUMPSTEAD, M. D., *Physician to the Northwestern Dispensary, N. Y.*

BLAIR BURWELL, M. D., *of Richmond, Va.*

PATRICK H. CABELL, M. D., *of Selma, Ala.*

JOHN HERBERT CLAIBORNE, M. D., *of Petersburg, Va.*

JOHN H. DIX, M. D., *of Boston, Mass.*

W. H. HARRISON, M. D., *of Sussex county, Va.*

WALTER F. JONES, M. D., *of Petersburg, Va.*

R. L. MADISON, M. D., *of Petersburg, Va.*

JAMES B. McCAW, M. D., *of Richmond, Va.*

JOHN P. METTAUER, M. D., LL. D., *Professor of Surgery in Randolph Macon Medical College.*

W. H. McKEE, M. D., *of Raleigh, N. C.*

GEORGE A. OTIS, M. D., *of Richmond, Va.*

J. F. PEEBLES, M. D., *of Petersburg, Va.*

WILLIAM B. READ, M. D., *Physician to the Boston Lying-in Infirmary.*

JOSEPH W. SMITH, M. D., *of Petersburg, Va.*

ALBERT SNEAD, M. D., *Physician to the Richmond Small Pox Hospital.*

GEORGE L. UPSHUR, A. M., M. D., *Surgeon to the Norfolk Marine Hospital.*

HENRY W. WILLIAMS, M. D., *Instructor in the Boylston Medical School, Boston.*

EDWARD WARREN, M. D., *of Edenton, N. C.*

INTRODUCTION TO VOL. III.

Our third half yearly volume is now presented in a complete form to the public, and the Virginia Medical and Surgical Journal, which commenced as an experiment, may with propriety assume a permanent position in the long list of American medical periodicals.

That the founders of this Journal should have regarded its success as uncertain, is easily understood. They proposed to publish a medical monthly of the largest size, the most expensive typography, the most ambitious in its design, without any influences to support its pretensions or force it into circulation. No wealthy publishing house whose agencies cover the whole country; no ancient college, with its well earned reputation, holds it up in its infancy, and surrounds it with every favorable circumstance; but alone and unaided, it appears as a candidate for public favor. Independent in its origin, and looking for support to the great body of the profession, whose interests it desired to uphold, it struggled slowly on. One by one, men good and true, enlisted under its banner; slowly but steadily its circulation increased, and now, with a band of collaborators of whom it may well be proud, and a subscription list which places it beyond the reach of failure, this Journal commences its fourth volume, with nothing to regret in the past, and every incentive to higher, larger and nobler aims for the future.

It may have been noticed, during the progress of this volume, that our original contributions have increased in number, and many of them have been derived from that sound and eminently practical school of country practitioners, whose true merit is but rarely appreciated. We have also included under this head, occasional translations from sources beyond the reach of the general reader. By adding a new department, we have been enabled to present to our readers, in all their freshness, the lectures of such men as Stokes, Malgaigne, Bernard,—a brilliant trio—and lastly, we have extended and enlarged the bibliographical notices and reviews, hoping to make the Journal not only valuable for its original and selected matter, but with frank and honest criticism to point out the merits and defects in the medical literature of the day.

Our great aim is to build up and strengthen our own institutions, to call out and develop our native talent, and to rouse and excite to active effort that profession which numbers in its ranks many of the best sons of Virginia. Can we succeed in this? If so, we have laboured not in vain.

The following Medical Periodicals are regularly received by the Editors.

The British and Foreign Medico-Chirurgical Review. Quarterly.
The Edinburg Medical and Surgical Journal. Quarterly.
The Retrospect of Medicine. Edited by W. Braithwate. (Reprint.)
The Journal of Psychological Medicine and Mental Pathology. Quarterly.
Pharmaceutical Journal and Transactions. Monthly.
The Association Medical Journal. Weekly.
The Medical Times and Gazette. Weekly.
Half yearly Abstract of the Medical Sciences.
The London Lancet. Published monthly.
Dublin Quarterly Journal of Medical Science.
The Quarterly Journal of Microscopical Science.
The Edinburg Monthly Journal of Medical Science.
Comptes rendus hebdomadaires des Seances de l'Academie des Sciences.
Annales de Chimie et de Physique Published monthly.
Gazette Medicale de Paris. Published weekly.
Journal de Chimie Medicale, de Pharmacie, et de Toxicologie. Monthly.
Annales d'Hygiene Publique et de Medecine Legale. Quarterly.
L'Union Medicale. Published tri-weekly.
Archives generales de Medecine. Published monthly.
L'Abeille Medicale. Published three times a month.
Revue Medico-Chirurgicale de Paris. Published monthly.
Repertoire de Pharmacie. Published monthly.
Bulletin de l'Academie Imperiale de medecine. Bi-monthly.
La Lancette Francaise. Published tri-weekly.
Archives d'Opthalmologie. Published monthly.
Journal de Medecine et de chirurgie pratique. Published monthly.
Revue Medicale Francaise et Etrangere. Published bi-monthly.
Journal des Connaissances. Published bi-monthly.
The American Medical Monthly. (In exchange.)
The American Journal of Science and Art. (In exchange.)
The New York Journal of Medicine. (In exchange.)
The American Journal of Medical Sciences. (In exchange.)
The Boston Medical and Surgical Journal. (In exchange.)
The Western Journal of Medicine and Surgery. (In exchange.)
The American Journal of Pharmacy. (In exchange.)
Journal of the Franklin Institute. (In exchange.)
The Southern Medical and Surgical Journal. (In exchange.)
St. Louis Medical and Surgical Journal. (In exchange.)
The Medical Examiner. (In exchange.)
The Medical Reporter. (In exchange.)
The Philadelphia Medical and Surgical Journal. (In exchange.)
The Medical News and Library. (In exchange.)
The Ohio Medical and Surgical Journal. (In exchange.)
The Southern Journal of the Medical and Physical Sciences. (In exchange.)
The Buffalo Medical Journal. (In exchange.)
The Stethoscope. (In exchange).
The Peninsular Journal of Medicine. (In exchange.)
The New Jersey Medical Reporter. (In exchange.)
The Nashville Journal of Medicine and Surgery. (In exchange.)
The Northwestern Medical and Surgical Journal. (In exchange.)
Nelson's Northern Lancet. (In exchange.)
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The New York Medical Gazette and Journal of Health. (In exchange.)
The Memphis Medical Recorder. (In exchange.)
The New Hampshire Journal of Medicine. (In exchange)
The Upper Canada Medical Journal. (In exchange.)
The Montreal Medical Chronicle or Montreal Medical Journal. (In exchange.)
The Charleston Medical Journal and Review. (In exchange.)
The New Orleans Medical and Surgical Journal. (In exchange.)
The New Orleans News and Hospital Gazette. (In exchange.)
The Califonia Journal of Medicine. (In exchange.)

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL

FOR APRIL 1854.

ART. I.—*An Examination into the Modus Operandi of Ergot, Strychnia, Quinia, etc.* By P. H. CABELL, M. D., of Selma, Alabama.

Before treating of the class of remedies which I propose to examine, it will be necessary to glance rapidly at the minute anatomy and physiology of the cerebro-spinal and sympathetic nervous systems, and the structure and functions of the animal and organic muscular tissues.

The nerves distributed to the muscles of animal life, have their centres in the brain or spinal marrow, and are tubes of great minuteness, containing a white granular substance, which doubtless is the agent actively engaged in transmitting impressions. This tube never branches nor anastamoses, but continues its unbroken path between the nervous centre and the sentient surface, or muscular tissue to be acted on. This tubular nerve fibre is distributed principally to the striated muscular tissue or the muscles of animal life, causing contraction under the stimulus of the will, or of some irritation applied directly to the nervous expansion, which stimulus causes contraction of the muscles by reflected action.

The muscular fibre possesses a tonicity which is vital, and altogether distinct from elasticity, and possesses this as an inherent property; for after having been completely severed from all other tissues, it can be made to contract under the influence of galvanism.

The sympathetic nerve, or the nerve presiding over organic or vegetative life, is composed of fibres of a different kind; originating in gangliform centres, and thence distributed to the muscular fibres of organic life. These fibres differ much from those of animal life, not being striated, possessing distinct nuclei, and contracting more slowly and permanently than the others. The sympathetic nerve, it is true, contains, besides its own fibres, branches from the cranial and spinal nerves, which obscure to some extent the action of this great and essential regulator of the functions of organic life. The mingling of the two systems of nerves thus intimately, seems to be for the purpose of combining their actions harmoniously together, and preventing any antagonism; in which possibly one might so far preponderate as speedily to destroy the life of the individual.

While the muscles of organic life obey the stimulus of the sympathetic, they do not so rapidly or energetically respond, as the striated muscles do to the spinal; but, on the other hand, they are much more easily and permanently thrown into a state of contraction by stimuli applied directly to their fibres.

A muscle of animal life is thrown into stronger and more violent contractions when the motor nerve distributed to it is irritated mechanically or chemically, than by applying the stimulus to the muscular fibre itself. On the other hand, the fibres of organic life, while under the control of the sympathetic to a great extent, still obey stimuli directly applied to them with promptness and certainty. The blood acting as a stimulus causes the heart to contract and expel it into the arteries; these obeying the same stimulus, and that of dilatation, contract and send the current on. The food passing through the stomach and alimentary canal stimulates the organic fibres of these cavities to contract upon it, and propel it, wave after wave, towards the relaxed portions, which in their turn no sooner feel the presence of their appropriate stimulus than they also contract, and so on to the end of the chapter. The uterus and the bladder contract upon their contents and expel them, when the distension has reached a certain point, a point sufficient to wake up their dormant irritability; and, after delivery, when the uterus refuses to harden, and close up the patulous mouths of the vessels, under the feeble nervous influence sent from the ganglionic centres, which are probably exhausted of their energy by the labour recently performed—what better method has ever been devised than that of stimulating the fibres to contract independently of the nervous influence, by introducing the hand into the uterine cavity? This contraction of the organic fibre is not the work of an instant, as in the case of the animal muscular fibre, but takes place slowly, and as slowly relaxes; this contraction may be produced at pleasure, and must be repeated till the nervous system has recovered its tone, and has generated influence enough to take charge of its office and keep the fibre tense. These muscles of organic life retain their irritability a long time, and are the last in the body to lose their vital endowments.

That these fibres do contract when separated from all nervous and vascular connection with the body, has been sufficiently proved, and that they are also under the dominion of the sympathetic nerve to a certain extent, is also well established. The controlling influence of this nerve over the circulation seems to be entirely due to the muscular fibres of organic life, which compose the greater portion of the middle tunic of the arteries, and also enter, to some extent, into the tissues composing the coats of the veins.

When the nervous influence is not sent out, either from being abolished, as in destruction of the nervous centres, or suspended, as in the cold stage of intermittents; the arteries and veins and capillaries remain flaccid, and dilate easily under the *vis a tergo*. The heart by a wise provision is furnished with muscular fibres of both kinds, and the striated muscular tissue maintains the organ in a state of activity till the sympathetic nerve has recovered its tone sufficiently to resume its control over the organic portion, or every chill would be mortal. That the sympathetic does preside over and control the circulation to a great degree, was proved by Bernard, who cut the nerve in the neck, where it can be easily isolated; immediately thereupon the skin became warmer and redder, and all the arteries, from the large to the small, were increased in calibre, and transmitted more blood than before the injury was inflicted; the distal extremity of the cut nerve was now stimulated by galvanism: as soon as the current was established the face began to grow pale, the arteries to contract, and the temperature to fall. This experiment was repeated many times with the same results. There was no sudden, spasmodic action, as when the cerebro-spinal nerves were stimulated, but a gentle, steady action, which continued some little time even after the stimulus which first aroused it had been removed. This steady, equal and continuous action seems most admirably calculated to supply the wants of the organic system, and to preside over nutrition, assimilation, circulation, and secretion, which must be continuously going on to preserve the health and life of the body.

Now there are certain articles of the materia medica which seem to possess a specific tendency towards, and control over, the sympathetic nerve and organic muscular fibre, and which on account of this property are employed by medical men in the treatment of many apparently dissimilar diseases. Among this class are ergot, strychnia, quinia, the root or seed of gossypium herbaceum, chloride of sodium, and many other less powerful agents which I have not space to consider.

These medicines, while they all have the same action and produce the same contraction of the organic muscles, do not possess it in the same degree. Some have a wide spread and almost universal action, controlling to some extent every organic muscular fibre in the body, and even exert their influence over many of the muscles which derive their nerves from the spinal system; others have a more local action, spending their energy upon some particular organ, or series of organs. Strychnia appears to be the most universal excitant of this class, and controls the muscular tissue entering into the blood vessels to an extent little inferior to quinia. Ergot on the other hand has a peculiar tendency to exert its action on the fibres of the uterus; and only affects the blood vessels secondarily and after the lapse of some time. For this first effect it has long been used, principally in the gravid state; but it also controls the fibres of the non-gravid uterus to a certain extent, causing it to harden and grow smaller. During the menstrual period the influence exerted by the ergot is very manifest, and when the flow of blood is excessive, and the organ relaxed, the happiest effects are often produced under its administration. The reason the effects of ergot are scarcely appreciable when the uterus is in its normal contracted state, is, first, the muscular structure of the organ is absolutely diminished to a great extent soon after labour, the fibres undergoing fatty degeneration and then being absorbed; and, second, the contracted and tonic state of the remaining ones. When by the gradual growth of the fœtus the fibres are put upon the stretch, these stretched fibres will contract under a much slighter stimulus than will be required when they are already contracted and their extremities approximated. The ergot administered in uterine hæmorrhages seems to do good both by stimulating the fibres of the uterus to contract, thereby consolidating the organ and closing the patulous mouths of the bleeding vessels mechanically, and also by stimulating the arteries and capillaries of this organ to diminish the calibre of their tubes, thus allowing less blood to pass through them. When used as a styptic, and applied locally, this contraction may be seen taking place in the cut extremities of the vessels, and as we know that the sympathetic nerve presides over circulation, and its division causes enlargement of the calibre of the vessels, it is not unreasonable to conclude that the ergot acts upon the uterus, the blood vessels, and all other muscular structures consisting of gelatiniform fibres principally, through the influence of the sympathetic nerve, stimulating it and causing it to perform its functions with more vigour.

I have very little doubt that the remedies that cure intermittents, remittents, uterine hæmorrhages, hæmorrhages generally, lead colic, diarrhœa, and many other maladies of this class, all act somewhat in the same way, and to a great extent are capable of being substituted the one for the other, as bases to many chemical compounds can be taken away, and others substituted, without changing the properties or altering the crystalline form of the salt, and I have no doubt that ergot will be found to have a control over all those diseases which seem to have a common pathology.

The frightful effects produced by using bread containing the spurred rye are caused, no doubt, by this same specific action, kept up for too great a length of time. The arteries going to the limbs, especially the smaller twigs and capillaries, are contracted slowly and permanently, and the blood prevented from reaching the muscles and other tissues in sufficient quantity, and gangrene results; just the effects produced by tying all the arteries going to a limb, only produced more slowly. The dry gangrene of old persons will illustrate well the mode in which ergot acts; here the arteries are ossified, or have become rigid tubes by atheromatous deposits, and are as unfit for carrying blood as if they were larger, and flaccid, or dense and unyielding from inflammation. In either of these conditions the blood will not reach the tissues of the limb in sufficient quantity for healthy nutrition; nor be able to leave the limb when its offices have been performed, and the result will be the same, as in the other case, mortification.

It may be asked if gangrene is caused by a diminished calibre of the vessels, why is it that the lower limbs are almost exclusively affected? and why do not the intestines, bladder and uterus, which are so largely supplied by the sympathetic, perish first? The reason of this selection seems to me obvious. The lower limbs are attacked in preference to the upper, because of the gravitating tendency of the fluids. When not resisted by the vital action of the organism, they stagnate in the vessels; so that there is too little blood passing to the limb, and that little is stagnant, motionless, retained. The immunity of the intestinal canal and the viscera generally may be found in the organization of those organs. They are all endowed with non-striated muscular fibres; these fibres are of low dynamic power, but possess great tenacity of life, and will remain irritable long after the striated muscular fibre has ceased to live; they also require much less blood and oxygen to perform their special functions than the muscles of animal life. The calibre of the vessels supplying the alimentary canal with blood is no doubt diminished equally with the rest, but the organs which they supply do not require the amount of oxygenated blood to perform their functions, which is essential to the existence of the tissues and muscles of animal life. Thus a bird will perish speedily upon an allowance of blood that would be amply sufficient for a reptile.

I have said more of the action of ergot than I shall say of any other remedy of the same category, as its action is better known, and illustrates well the action of the others.

Lead colic, one of the most painful of all diseases, and one very difficult to subdue speedily, is caused by palsy of the muscular coat of the intestines. Any remedy which will restore the contractility of this muscular coat will cure the disease; provided the cause originating it is at the same time removed. Strychnia has been used both in France and this country for this purpose with great success. It acts by stimulating the muscular tissues to contract. For this reason it is used in palsy; but seems to have little effect upon the muscles still under the control of the will when given in safe doses; but to expend its force upon the involuntary and reflex muscles principally, or those most removed from under the control of the will. It is an excellent tonic, especially for the urino-genital organs, and I think it not unreasonable to suppose that in menorrhagia it will be found very beneficial when the hæmorrhage is caused and kept up by a relaxed state of the uterus. It produces its effect by imparting tone to the debilitated fibres; in spermatorrhœa, impotence, palsy of the bladder, and exhaustion of the nervous system generally, the effect produced is salutary, and the action the same.

In intermittents, if the dose required to break up the paroxysm should be too large to be administered with safety, it may be combined with quinine or used alone, after the great effect of the latter drug had been obtained, to keep the muscular tissues of the arteries in such a state of tonicity that the circulation may go on normally, and even if the malarious element (whatever that may be) should be absorbed and enter the circulation, (its prostrating effect upon the system and sympathetic being prevented, and the vessels being preserved of a normal calibre and elasticity,) it is soon cast off by the secreting and eliminating glands.

It is a law of the organism which has, I believe, no exceptions, that the more active the changes produced in the living tissues, and the more intense and rapid the nervous influence, the sooner is destruction and exhaustion the consequence. Birds have their temperature higher than any other class of the animal kingdom, their nutrition is active, their circulation rapid, and a great power results; on the other hand their temperature falls rapidly upon deprivation of food, and the irritability of the muscular tissue is rapidly lost after death. In cold blooded animals the circulation is sluggish, the temperature low, or very near that of the medium in which it is immersed, and the muscular energy at a minimum in point of intensity, but as respects duration greatly exceeds that of the warm blooded animals. So are the actions of quinia and strychnia; the effects produced by the first are decided, prompt, salutary, but owing to the unpleasant effects which so often follow its use in large doses, it is left off too soon, and the patient being subjected to the same morbific causes which produced the disease primarily, speedily falls again before its prostrating effects; but if a steady, tonic, equible action is kept up by any of the remedies of the class which controls the muscles of organic life, the chill cannot come on, for the arteries and capillaries will not dilate nor allow themselves to be dilated, and the congestion cannot take place. Strychnia appears to exert this tonic effect admirably, and may in small doses be given with safety for an indefinite length of time. Its effects seem to be exerted more universally than any others of the class, and it seems capable of controlling more morbid phenomena; acting, not on any particular organ exclusively, as some of the others seem to do, but controlling to a great extent the organic muscular fibre wherever found. Since writing the above, I have been informed by physicians of this place that in their practice strychnia had produced in intermittents the most marked and happy results, and seemed to give greater immunity from fresh attacks than any other medicine. Chloride of sodium, one of our best styptics in hæmoptysis, and other hæmorrhages, doubtless acts in the same way to a great extent; and although far inferior to quinine as an antiperiodic, nevertheless is capable in most cases of arresting or preventing this disease. When used largely as an article of food, it is said to prevent the malarious poison in which a person may be living from gaining the mastery over him; while in the same place, and under like conditions of life, saving the salt, intermittents are very apt to attack him. Another remedy used sometimes in the southern states, and said to possess the useful properties of the ergot, free from its disagreeable and dangerous consequences, is the bark of the root of the gossypium herbaceum, and also the seed of the same plant. The mode in which it is usually administered is the following: 4 oz. of the inner bark of the root boiled down in a quart of water to a pint, of which a wine glassful may be taken as a dose every 20 or 30 minutes, after labour to cause contraction and solidification of the uterus, and before to hasten the expulsion of the fœtus; used as a means of preventing and curing the exhausting hæmorrhages to which the women at the South are peculiarly liable, it should be administered in much smaller doses, with longer intervals between, but persevered in for some days, or till unpleasant effects appear or are threatened.

A decoction of the seed is also a favourite domestic remedy to cure chills or to produce abortion. Dr. Mettauer, of Virginia, uses the cotton and speaks highly of it, ranking it in efficacy only a little below ergot. He uses an etherial tincture instead of the decoction. It is more than probable that an alkaloid, similar to quinia, may be obtained from it; should this prove so, we shall have a cheap substitute for a very costly remedy, whilst it is feared, from the wasteful way in which the bark is obtained, that the supply may be very much diminished, or exhausted entirely before many years.

The cotton plant can be obtained in any quantity desired, and is found growing in the very regions where malaria are so rife; the bane and antidote are both together.

This generalization of the action of those medicines which seem to be stimulators of the organic muscular fibres, both through the sympathetic and by direct contact with the fibres themselves, is I am well aware very imperfect in its details, many remedies coming properly under the class being entirely omited, and also very meager in facts; the theory however seems to me not improbable, or strained, and I wait in the sure hope of seeing these assumptions confirmed, or of being able to confirm them myself, by the touchstone Experience.

ART. II.—*Extracts from the Records of the Medico-Chirurgical Society of Richmond.* By the SECRETARY.

January 3d. Two cases of Traumatic Cataract.—Dr. PARKER related the following case: A lad of nine or ten years received a blow on the eye from a small pebble, which inflicted a slight wound of the cornea. There was not much vascular excitement of the conjunctiva; the pupil was clear; the movements of the iris were natural, and there was not much pain. Under these circumstances, Dr. P. was satisfied with directing the application of cold compresses to the eye-ball, and the use of a mild astringent collyrium.

One week afterwards, he saw the child again, and was astonished to find a well marked opacity behind the pupil. The capsule, in fact, was of a milky white colour throughout its whole extent. The wound of the cornea had been converted into a circular ulcer, but it did not penetrate the anterior chamber. The aqueous humour had not escaped; there was no anterior or posterior synechia, nor deformity of the pupil or other symptom of iritis. Vision was greatly impaired, though not entirely lost. There had been considerable pain in the orbit.

The patient was put upon small doses of calomel, and cupping and counter-irritation were employed. Under this treatment, the opacity gradually diminished, until, at the end of four or five weeks, the capsule had completely regained its transparency, and vision was entirely restored.

Dr. GIBSON reported a somewhat similar case: A boy of twelve years of age fell into a bush, and, in so doing, received a severe concussion of the right eye. When he was seen by Dr. G. several days after the occurrence of this accident, the eye presented the following appearances: The cornea was perfectly clear and free from injury; the iris was inflamed, and the uvea had already contracted adhesions with the anterior surface of the capsule; the pupil was deformed, and the dull opacity characteristic of capsulitis could be perceived behind it. The vessels of the conjuctiva were highly injected. The next day the capsule was completely opaque; its surface was manifestly covered with fibrinous deposits.

Active treatment was at once instituted. The patient was cupped, and mercurials and belladonna were administered internally, while revulsives were applied to the temple and neck. Resolution gradually took place. Absorption was complete at the end of five weeks; the iris was liberated, and resumed its normal movements, and vision was entirely restored.

January 17th. Rupture of the Tendon of the Quadriceps Extensor Femoris.—Dr. P. TRENT reported the case: It occurred in the person of an old negro servant, who was assisting in the construction of a fence. A large post fell upon his thigh, just above the knee. The quadriceps was doubtless thrown suddenly into strong contraction to resist this blow, and a rupture instantaneously occurred. The patient fell and experienced violent pain at the seat of injury, with inability to extend the leg. The surgeon who was called in treated the injury as a bruise. Two weeks afterwards, the patient was placed under Dr. T.'s care. There was a large depression above the knee, and apparently some effusion; the retracted extremity of the quadriceps could be felt about two inches from the upper edge of the patella; the patella itself was more moveable than usual. The power of extending the leg was lost. Fortunately, there was no inflammation of the knee-joint. The limb was placed in extension on an inclined plane, and surrounded by a proper retentive bandage. Dr. T. remarked that he feared that reunion might not occur, the ruptured extremities of the tendon having been allowed to remain separated for so many days after the accident, and enquired into the applicability of tenoraphy, in case his apprehensions should be realized. Dr. T. then alluded to the rarity of this species of injury, which was proved by the fact that Sir Astley Cooper recorded only two examples of it, and Liston encountered it but once in his vast experience.

[From the memoir of Dr. Demarquay, we learn that the prognosis of ruptures of the tendon of the quadriceps femoris is much more unfavourable than that of rupture of the tendo achillis. In the fourteen cases of the former affection collected by that author, the treatment lasted from 21 days to 18 months; its average duration was 60 days. Only seven of the patients were cured. A lesion which requires a sojourn in bed of two months, and which renders the inferior extremity useless in one case out of two is a grave affair. We can hardly suppose, however, that the statistics we have given represent the results of this injury under judicious management. In some cases, at least, it is very amenable to treatment. Dr. Mayo reports a case* in which complete union of a ruptured quadriceps tendon was obtained in three weeks by position and appropriate bandaging, although four months had elapsed before any treatment was instituted. It is the opinion of Nélaton that this injury should always be treated by the starched bandage. Velpeau and Blandin have each procured a complete cure by this method. It maintains the limb in perfect and permanent extension; it restrains muscular action, and allows the limb to be used at an early period. The mode of application is the same as for fractures of the femur, except that the patella is forced upwards and the muscles downwards by graduated compresses.

With the exception of rupture of the tendo achillis, which was studied by the elder Monro, himself a victim of this accident, the subject of ruptures of the muscles and tendons has received little attention from English and American surgeons. We have collected 59 cases of these lesions, of which 24 are extracted from the monograph of Sédillot, 14 from the memoir of Demarquay on ruptures of the quadriceps femoris, 5 from Baron Boyer's great work, 4 from the Dictionary in 30 volumes, 3 from Liston's Practical Surgery, 3 from Samuel Cooper's Dictionary, 2 from Nélaton's Elements of Surgical Pathology; the four remaining cases are reported by Velpeau and Vidal, and Drs. Mayo and Trent.

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* *Va. Med. & Surg. Journal,* vol. I, p. 388.

In these 59 cases, the rupture occurred in the body of the muscle in 14; either in the tendon or at the point of union of the muscle and tendon in 39; in six cases the precise seat of the lesion is not recorded. This result indicates that tendons are three times as liable to rupture as muscles; but this general conclusion requires examination. In examining the 53 cases in which the seat of rupture was ascertained, we find that those muscles which have long fibres and short tendons break in their muscular portion. Richerand, S. Cooper, Larrey, and Boyer have each reported an example of rupture of the rectus abdominis; in each case the division occurred in the muscular fibres; the sartorius, psoas and iliacus, sterno-mastoid, and biceps cubiti are rarely ruptured, but when this accident does occur the lesion is constantly situated in the fleshy portion of the muscle. The extensor muscles have usually numerous short fibres, and are ruptured in their tendinous portion. It is proved, however, by incontestible facts, that the deltoid, rectus femoris, gemellus and other extensor muscles occasionally separate in their fleshy portions. The rule deduced from our statistics in regard to the frequency of tendinous ruptures, is only applicable to the extensor muscles; the flexors usually separate in their muscular structure. When the muscular structure of the extensors separates, the lesion is usually incomplete.

Muscular ruptures are rarely dangerous; they usually unite readily, although, according to Paget, the plastic process is more tedious than after the division of tendons. The function of the muscle is often impaired by the stretching of fibrous material which is the bond of union, or by the formation of adhesions. In one of the two cases of rupture of the sterno-mastoid muscle observed by Cavalier, torticollis existed for two years after the accident. The most serious case of muscular rupture on record is that reported by Deramé. A man experienced a violent pain in the loins while attempting to lift a tub of water. Inflammatory symptoms supervened, and many abscesses were formed; the man died, and at the autopsy a rupture of the psoas muscle was discovered.

Tendinous ruptures are confined almost exclusively to the tendons of the extensor muscles of the leg and foot. Ruptures of the tendo achillis are the most common, then come ruptures of the tendon of the quadriceps femoris; 19 of the cases we have collected, were examples of this accident. We have been unable to find any instance of rupture of the tendons of the triceps extensor cubiti, a muscle which offers so close an analogy in its functions and arrangement to the quadriceps femoris, although authors speak of the occurrence of this lesion. Ruptures of the ligament of the patella are very rare, but are occasionally produced by forced flexion of the leg.*

Tincture of Colchicum.—Dr. **Gibson**, after alluding to the uncertainty of the ordinary preparations of colchicum, stated that a tincture of colchicum seeds, sold by a German druggist of Richmond, was recommended to him about twelve months ago, and that he experienced its efficacy in his own person. Since that date, he had treated eight cases of acute articular rheumatism almost exclusively with this tincture, and in every instance the results had been exceedingly satisfactory. Presuming that the superior efficacy of this tincture depended on its preparation from *recent* seeds, he had desired one of the pharmaceutists of the place to import a tincture already prepared. Messrs. Purcell and Ladd had accordingly procured specimens of tincture of colchicum made in London, but they were not found to be more uniform or reliable than those prepared in this country. The German tincture differed from that which is commonly dispensed in its lighter colour and acrid taste.

Dr. T. **Johnson** stated that the tincture alluded to was originally prepared at his suggestion. It was made from seeds imported from a druggist of Hanover, who collected them himself and transmitted them with many precautions. He had often seen these seeds; their colour accounted for the appearance of the tincture made from them; they were many shades lighter than the seeds of English colchicum. He fully concurred in Dr. Gibson's opinion of the therapeutical utility of this preparation. Fifteen drops constituted a full dose, and frequently caused nausea and six or eight alvine evacuations. Whenever he had occasion to employ colchicum, he selected this reliable and uniform preparation.

Lotions of Alcohol.—Dr. **Gibson** remarked that the advantages of alcohol as a local application was not sufficiently appreciated by surgeons. He had recently observed its effects in aborting inflammation very strikingly manifested in several cases of orchitis. He did not believe that it acted merely by lowering the temperature as it evaporated, for ether, ice, and other cooling applications were not equally efficacious. It rather operated dynamically, constringing the vessels and other tissues of the part, and beneficially influencing their vital properties. In superficial inflammations generally, and in the slight effusions which occur after bruises and other injuries compresses saturated by alcohol might be advantageously substituted for the applications of lead-water, muriate of ammonia, and spirits of camphor usually employed. He had particularly observed the good effects of alcoholic lotions in erysipelas.

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* Consult on this subject *Mémoire sur la rupture musculaire,* par **Jean Sédillot,** *dans les mém. de la Soc. de Méd. de Paris. Paris,* 1817*;* **Demarquay** *Sur la rupture du tendon du muscle crural anterieur ;* **Boyer,** *Traité des mal. chir. ;* **Velpeau** *Méd. operat. ;* **Nélaton,** *El. de Path. chir. ;* S. **Cooper,** *Dict. of Pract. Surg. ;* **Liston,** *Pract. Surg. ; etc.*

Erysipelas.—Dr. Atkinson remarked that, in the country, a mixture of brandy and chalk was a favourite and efficacious application in erysipelas. He related the history of a lady, who for many years was afflicted with periodical attacks of erysipelas of the face, which were uniformly relieved by this simple remedy. He had observed other cases in which its efficacy was equally apparent.

Dr. McCaw observed that, in the lower country in Virginia, diluted whiskey was the most common topical application in erysipelas, and that he had found it a very useful remedy. Alcohol alone, or diluted with water, was doubtless of equal efficacy.

Dr. Gibson corroborated what he had said in regard to the resolvent action of alcohol, by detailing several cases of erysipelas treated by this method.

Dr. Otis expressed his astonishment at the importance attributed to the local treatment of erysipelas by the physicians who had spoken. Erysipelas of the face was usually of constitutional origin. It was necessary, therefore, to correct the deranged condition of the primæ viæ by mercurial purgatives, preceded, if requisite, by an emetic, to abstract blood locally or generally, or else to administer wine and bark, and support the strength in the adynamic condition which was so frequently present. The simplest local applications were the best; powdered starch for example, or cotton wool, or warm fomentations, sometimes comforted the patient. Dr. O. was not inclined to estimate the value of external remedies very highly, for those of the most opposite character were supported by the same positive recommendations. Refrigerants had not more advocates than emollients. Malgaigne was sure that camphor was of service, and Velpeau boasted of the effects of a solution of the sulphate of iron. Many surgeons employed nitrate of silver, mercurial ointment, and tincture of iodine, others were satisfied with lard or white paint. The only certain proof of the efficacy of any of these applications would be a considerable number of cases in which they diminished the duration of the disease. None of them were supported by any precise evidence of this sort; most of them had the disadvantage of concealing the seat of disease. If, as some authors taught, the membranes of the brain were sometimes affected by metastasis in erysipelas of the face, it would be probable, theoretically, that cold repellent lotions would favour this result; but even on the more correct hypothesis that the meninges became involved by extension of inflammation, it was still improper to employ remedies of this sort. In periodic erysipelas, such abortive treatment was particularly reprehensible. This affection was more properly an erythema, in the majority of cases, and was usually connected in women with some disorder of the catamenia, and in men with a condition of plethora; the subcutaneous tissue was not involved, the vascular action was slight; the constitutional disorder alone required interference. Dr. O. then alluded to the treatment of erysipelas by collodion, which answered the triple purpose of removing the diseased surface from the action of the atmosphere, of compressing it, and, according to Latour, of lowering its temperature, and described a number of cases in which he had seen this treatment instituted by M. Briquet, apparently with advantage.

Dr. **Bolton** reported the history of a negro man in whom erysipelas supervened upon a gun-shot wound of the face. Twenty or more small shot lodged in different parts of the face; one of them entered the right eye, and destroyed it. A week after the injury, erysipelas occurred; it was of that erratic character so indicative of a feeble and impaired system. In a few days, the lips were attacked, and then the tongue; the patient complained of difficulty of deglutition and the respiration was laborious; moist râles were audible over every part of the chest. There was no cough. About twenty-four hours after the occurrence of these symptoms, the patient died. At the autopsy, the sub-mucous tissue of the bronchial tubes, even in their smallest ramifications, was observed to be filled with serum; the trachea and bronchi contained a frothy mucus. Dr. B. remarked that this was the only case in which he had witnessed the extension of erysipelas to the lungs.

Traumatic Sub-Conjunctival Ecchymosis.—Dr. **Gibson** reported the case; An old lady slightly abraded the conjunctiva with the handle of her spectacles in carelessly putting them on. She felt no pain or inconvenience at the time, but in an half-hour she experienced an unpleasant sensation of heat and distension in the eye. Dr. G. was summoned, and found the cornea surrounded by a complete zone of extravasated blood. The sub-mucous tissue was infiltrated by a very considerable bloody effusion, and the conjunctiva was raised from the subjacent parts. The absence of distended vessels for other symptoms of inflammation explained the true nature of the phenomenon, and absorption went on rapidly without any more active treatment than the application of cold.

February 21st. Ischuria Renalis—Complete Suppression of Urine for Twelve Days.—Dr. Snead reported the case: It occurred in the person of a middle-aged female, of spare habit and cachectic appearance, who was suffering from a grave uterine affection. When Dr. S. was summoned, the patient informed him that she had passed no urine for nine days. There was some dullness above the pubes; the catheter was immediately introduced, but the bladder was quite empty. The neck of the uterus was enlarged and lobulated, and offered a schirrous hardness to the touch. There was no pain about the kidney or other symptom of nephritis; no diarrhœa or vomiting; no urinous smell about the perspiration; nor any disorder of the intellectual faculties or tendency to coma. The bowels were constipated. Dr. S. prescribed a combination of squill and blue mass, and at the end of three days from his first visit, the urinary secretion was re-established. No symptoms of importance occurred during this period.

Dr. S. stated that this patient was a respectable woman, and that the members of her family were observant and reliable. He was convinced that their statements were entitled to confidence. As a proof that the patient was watchful and careful, he mentioned that, during her attack, she once or twice perceived some moisture about the genital organs, and called her attendants, who examined this discharge and found that it was of a leucorrhœal nature, proceeding probably from the diseased uterus.

Dr. S. had been informed that, on a former occasion, this patient had suffered from a complete suppression of urine for nine days, during which period convulsions supervened.

The Susceptibility of Daguerreotypists to the Action of Mercury.—Dr. Mills asked if other members had observed any special susceptibility to the influence of mercurial preparations in individuals engaged in the preparation of daguerreotype likenesses, and consequently exposed to the vapours of mercury. He had lately attended a patient of this class, who was salivated by a very minute dose of calomel, and who related that some years ago, before his adoption of the daguerrian trade, his system was very refractory to the constitutional effects of mercury. It was natural to suppose that daguerreotypists would suffer from ulcerations of the mouth, ptyalism, tremors, paralysis, and other chronic effects to which manufacturers of looking-glasses and others engaged in trades in which mercury is handled were subject, but Dr. M. desired to ascertain whether individuals predisposed to these chronic disorders were more liable than others to be affected injuriously by the therapeutical employment of mercurials.

Chloroform in Colic.—Dr. Snead reported five cases illustrative of the efficacy of chloroform, internally administered. Three of these were examples of spasmodic colic of more than ordinary severity; each of them was relieved by drachm doses of chloroform in aqueous mixture. Each patient sank into a profound slumber a short time after the administration of the first or second dose. A powerful cathartic completed the treatment.

The fourth case was one of lead colic; it was treated by the same method, and with like success.

The fifth case was one of supposed intestinal strangulation. Obstruction of the bowels, with intense abdominal pain, and stercoraceous vomiting had existed for several hours, when chloroform was given in tea-spoonful doses with the effect of immediately palliating and ultimately relieving all the symptoms.

Dr. S. concluded from these cases, and from others which had come under his observation, that chloroform was destined to hold a very high rank as an internal remedy.

Dr. Bolton thought that the opponents of chloroform were commonly those who had little experience in the use of it. Few physicians who were familiar with the internal and external applications of this agent were inclined to cavil at its effects.

Dr. B. referred to the advantages of chloroform as an excipient for camphor, a single drachm being sufficient to dissolve three drachms of that gum. This property of chloroform might be made available for the preparation either of a powerful antispasmodic, or of a camphorated tincture of chloroform which was a grateful carminative and anodyne.

Dr. B. adduced a case of colic relieved by the internal use of chloroform, in which the patient, after sleeping for a time as from the effects of chloroform inhalation, awoke in a state of great nervous excitement.

Dr. T. JOHNSON corroborated Dr. Snead's assertions in respect to the advantages of the internal administration of chloroform, by citing several cases of colic which he had treated by this agent with the happiest effects. He had found that the chloroform invariably excited purgation, but had never known it to occasion the excitement which Dr. Bolton had described.

Epilepsy.—Dr. CUNNINGHAM related the following case as an illustration of the great difficulty of determining, in a given case, whether epilepsy depends upon centric or eccentric irritation.

A son of the late eminent Dr. H——, of New York, was subject to convulsive seizures of frequent recurrence; he was in a feeble state of health, and his convulsive attacks were attributed by his father and other intelligent practitioners to disorder of the liver. He was sent abroad, with instructions that he was to be subjected to no treatment which was not based on this hypothesis. The French physicians whom he consulted were divided in their diagnoses. He died some months afterwards in London, and, at the autopsy, a spiculum of bone was found impinging upon the anterior portion of one of the cerebral hemispheres.

Disease of the Epiglottis.—Dr. GIBSON reported the case: He had been called to see a patient with phthisis, whose epiglotis was so much hypertrophied that a considerable portion of it could be examined without any artificial depression of the tongue. It was thickened and irregular, and its colour indicated the effects of chronic inflammation. The only symptom of importance produced by this remarkable enlargement of the epiglottis, was a certain amount of difficulty in deglutition. Dr. G. had aplied a solution of nitrate of silver to the diseased structure, but without any obvious benefit.

Dr. GOOCH observed that in cases of this description more active treatment was frequently required than the topical application of nitrate of silver. Scarifications were often of advantage, and the acid nitrate of mercury sometimes relieved the morbid condition of the orifice of the larynx, when less powerful escharotics failed. The internal use of preparations of iodine and mercury should be conjoined with the local treatment.

Dr. BOLTON described a case which he had attended at the State Armory, with Dr. Broocks, the late surgeon to that establishment. When they reached the patient he was nearly asphyxiated, and tracheotomy was accordingly performed. Great immediate relief was obtained, but the patient died in a few hours, apparently from exhaustion. On post-mortem examination, the epiglottis was found to be enormously thickened; the glottis was also hypertrophied, and the laryngeal orifice was nearly obliterated.

Supposed Congenital Cataract.—Dr. W. E. Wilson reported the case: A child of three years of age was brought to him with a capsulo-lenticular cataract in one eye. The parents declared that this affection had existed from birth, but from certain circumstances, Dr. W. was inclined to believe that the child had been the subject of the purulent ophthalmia of new-born children.

Dr. W. mentioned that, believing in the curability of opacities of the crystalline system of inflammatory origin, he had long sought for an opportunity of subjecting a case of this sort, to medical treatment.

The present patient was not a very promising one, but the result was most satisfactory. The child was put upon a course of iodide of potassium and mercury, in alternation, and revulsives were employed. After a few weeks, Dr. W. lost sight of the patient, but the parents persevered in the treatment for some months subsequent to this date.

In rather more than a year, the child was again presented to the notice of Dr. W. Every trace of opacity had disappeared from behind the pupil, vision was perfect, and the functions of every portion of the eye were properly performed.

Art. III.—*Observations on Jaundice.* By Edward Warren, M. D., of Chowan county, North Carolina. [Being an Extract from a Report on the Diseases of the Eastern Section of North Carolina, addressed to Dr. J. F. Peebles, Chairman of the Committee on the Epidemics of Virginia and North Carolina.]

During the past year, jaundice has prevailed to some extent in Chowan, but much more considerably in several of the adjoining counties. In Washington, which is situated on the southern border of Albemarle sound, it presented itself as a concomitant of nearly every disease which prevailed during the summer and fall months. My idea is, that there are several varieties of this disease, each of which differs from the others, both in origin and symptoms, and requires an essentially different treatment.

(1.) The first variety, to which I desire to call your attention, results from the production in the blood of an abnormal amount of the elements which constitute bile, and is attended with decided activity on the part of the liver. Under such circumstances, bile is eliminated in large quantities, but is vitiated and unhealthy, for the reason that the excessive activity of the liver produces in it an irritation which prevents the proper performance of its functions. It acts rapidly, but not well, and hence it is, that jaundice frequently presents itself in connection with bilious diarrhœa, remittent fever, and cholera morbus,—diseases in which there is an excessive discharge of bilious matter. That the tissues generally assume the yellow hue of jaundice, and that its other characteristics are present, in connection with these diseases, is well known to every physician who has practiced in malarious districts. After much consideration, I have concluded that the only rational explanation of this phenomenon is the one I have just proposed. In all acute inflammation of the liver, and whenever we have proof of excitement and activity in that organ, the complexion presents a yellow hue, and various other symptoms of icterus manifest themselves.

The treatment to which I resort in this variety of jaundice, is simple, and generally successful. The indications are: first, to remove from the system as much of the diseased blood as can be lost with impunity; secondly, to reduce and allay the irritation about the liver, so that its functions may be properly performed; thirdly, to correct that abnormal action in the nutritive process, by which the biliary elements are formed in excess. If the pulse will justify bleeding, I use the lancet, in order to fulfil the first indication. I then administer ten grains of calomel, with the same quantity of Dover's powder, and purge in a few hours with salts and quinine as in ordinary cases of bilious fever. The calomel allays the irritation of the liver, while the opium restrains its excessive activity, and the ipecac gives a centrifugal direction to the circulation. My reason for adding quinine to the sulphate of magnesia employed for purgation, is that it seems to possess the power either of preventing, in a measure, this abnormal development of bile, or of neutralizing the elements of that secretion after they have been generated. I think the efficacy of this salt, in arresting and controlling miasmatic affections, is mainly attributable to this preventive or neutralizing property. In addition to these remedies, I cup, leech, or blister the abdomen just over the region of the liver, and resort to every possible measure to repress irritation in that organ.

After arresting the fever by these measures, I direct the patient to abstain, as far as possible, from the use of those articles of food which are rich in carbon and hydrogen; and employ alteratives freely, such as iodide of potassium, nitrate of silver, iodine, the various preparations of iron, etc.

Frequently, by the use of the latter remedies, this excessive production of biliary elements is restrained, the liver works off the abnormal accumulation, and the system returns to the healthy standard without difficulty or delay. It is in this way, sir, that you have succeeded so well, in treating this disease with nitrate of silver in the cases reported for the Medical and Surgical Review, and it is in consequence of neglect of these remedies that jaundice often appears so obstinate and unyielding.

(2.) The second form of this disease results simply from a want of action in the liver. Dr. Wood and others contend, that a torpor of this great organ is invariably the cause of jaundice, and direct all their remedies towards the removal of this quiescent condition, in order to effect a cure of the disease. When this state of things really exists, the primary indication is, of course, to restore the natural activity of the liver. Sometimes, when there is much excitement, a good bleeding, with a small dose of calomel, will accomplish this end at once. Or a full dose of calomel in connection with jalap, will start the liver into action, and afford almost instantaneous relief. The course which I pursue, however, is as follows: I apply a blister directly over the liver and give ten grains of calomel every second hour until the bowels have been freely moved. If the patient is not decidedly improved in twelve hours, I repeat the calomel, giving the same quantity, and in a similar manner. I have never known salivation induced by this treatment, and have seen most beneficial effects from its employment. Many mild cases are easily cured by small doses of blue mass, repeated frequently, and some after resisting mercurials, yield readily to castile soap or some other gentle purgative.

(3.) The third variety results from the direct absorption, sometimes of the colouring matter, and frequently of the bile itself. I will not attempt to detail the conflicting arguments of the friends and opponents of the doctrine of the re-absorption of bile. You are as well acquainted with the opinions of Cullen, Thomson, Chapman and others as myself, and I will simply give you the impression which has been produced on my mind, in consequence of certain facts which have come under my observation. I have frequently seen persons become instantaneously jaundiced when in the very act of vomiting or of discharging bile from the anus, and when no evidence presented itself of torpor of the liver. I have witnessed a rapid change in the colour of the tissues—their natural hue being transformed into that of the darkish green bile, which at the same time was being evacuated in large quantities with each discharge from the bowels. In all probability you have observed the same thing, for it frequently takes place in children, and is usually a fatal symptom. I have known the employment of remedies for the purpose of relieving an irritated condition of the liver, stomach or intestine, to eventuate in the permanent cure of an obstinate case of jaundice; and as all writers on pathology agree that absorption is frequently promoted by the irritation of a particular membrane, I have concluded to believe with Cullen, that bile, or its colouring principle, may be taken into the system by any tissue with which it is brought in contact. In this opinion I am sustained alike by the observations of Tiedmann, who detected bile in the lymphatics of the liver, in cases of artificial obstruction of biliary passages, and the fact that dissections of persons labouring under jaundice, at the time of their death, have frequently shown the liver to be exempt from disease.

This fact is an important one, for the reason that if no traces of disease, no evidences of an abnormal state of the liver exist, the idea of excessive activity or unnatural torpor is precluded, and if jaundice presents itself, it must have resulted from absorption of biliary elements, and in no other way. Johnson, in his excellent work on the liver, says, "We can discover in health two kinds of bile, distinguished by the names of hepatic and cystic." The former, which is contained in the liver and hepatic duct, is of a bright orange colour, and is *not bitter.* The latter is found in the gall bladder, and is a thick, ropy fluid, of a deep orange brown, or even greenish tint, and intensely bitter. Both of these varieties are originally the same, but the hepatic bile having passed into the gall bladder, acquires the above mentioned properties in that receptacle. I believe that in a majority of cases, where re-absorption takes place, hepatic bile alone is taken up. This fact tallies with the observations of Scherer, Simon and Lecanu, who found bile pigment in excess, and the bitter principle entirely wanting in the blood of jaundiced patients. It is well known that in some cases of jaundice an immediate and profound coma presents itself, from which the patient never recovers. This condition of things, doubtless, results from the absorption into the system of cystic bile, and the direct sedative effect of that fluid upon the brain. The same absorption takes place in the second stage of yellow fever, and is generally attended with similar results.

The treatment of simple hepatic jaundice consists in allaying whatever of irritation exists, either in the stomach, intestines or liver, and in bringing the latter organ up to that point at which its functions are properly performed and healthy bile secreted. It is also necessary to compel the patient to abstain from those articles of food which are rich in the elements that constitute bile, and at the same time to use others which are nutritious and sustaining. Tonics, exercise, the cold bath, and whatever has a tendency to give tone to the tissues, and to raise the system to the standard of health, should be freely employed throughout the continuance of the disease. In the more violent cases I endeavor to relieve the sufferer by applying blisters to the back of the neck and immediately over the liver, and give large doses of calomel, frequently repeated, so as to stimulate the liver to prompt and decided action.

ART. IV.—*On the Curability of Tubercular Meningitis.* By F. RILLIET, Physician-in-Chief of the Geneva Hospital. Second article. [Archives générales de médecine.]

The fact that, since the time of Dr. Whytt, the incurability of tubercular meningitis has been regarded as a fixed law, will cause the following observations to be read, perhaps, with some interest. These three are the only cases which have terminated favourably out of more than seventy cases of this disease which I have observed at Geneva during the last ten years.

In the first two, the disease did not pass into the second stage, and, although it was well marked, it did not present, in them, that gravity and hopeless aspect which characterize true meningitis. The third case is far more interesting; it is a unique fact in science; it is the only case on record of a tubercular cerebro-spinal meningitis terminating in recovery, after having reached its third stage. A few months after his complete recovery, this child, so miraculously cured, was in imminent peril from a fracture of the cranium; then, after about six years of perfect health, meningitis again supervened and terminated in death. At the autopsy I discovered the old and recent lesions corresponding to these three affections.

I must claim the indulgence of the reader for the details into which I am about to enter; as the accuracy of my observations may be called in question, I feel it necessary to fortify them with all the elements of certainty which can be desired.

CASE I.—*Girl of ten years. Scrofulous constitution and hereditary predisposition, prodromes of three weeks duration; onset of the disease accompanied by vomiting, cephalalgia, and photophobia. Calomel treatment, salivation; cure. A few months subsequently white swelling of the elbow. Four years afterwards, an apparently recurrence of meningitis; recovery.*—V———, æt. 10, was the daughter of a tailor; her father was scrofulous; one of her sisters, who also suffered from scrofula, died, at 15, of tubercular meningitis; a third sister was epileptic. This child had all the appearances of scrofula; she was subject to frequent attacks of opthalmia, which had left its traces on the cornea.

Condition before the attack.—In January, 1846, V——— became irritable and fretful; she grew pale and thin; her nights were restless; her appetite was capricious; her bowels were irregular; she complained of pain in her head; but, as she still walked about, her parents did not seek the advice of a physician.

Onset.—On Wednesday, January 28th, 1846, about three weeks from the beginning of these prodromes, the headache increased, and the child vomited frequently during the day. Dr. Herpin visited her in the evening and found the pulse beating regularly at 88; the intellect was clear, there was some tendency to drowsiness. (Calomel, gr. vj.) The remedy produced several evacuations during the night.

The second day the vomiting continued, but the headache was less intense. Same treatment, same result.

Jan. 30th. The little patient was prostrated; the pulse was at 70, and *irregular;* the respiration had *fallen to* 12; the pupils were *dilated,* and contracted slowly under the stimulus of light; the abdomen was contracted. The child was very irritable, and allowed herself to be examined reluctantly; there was much tendency to coma. In the evening, calomel, gr. v., which was followed by two or three dejections.

Jan. 31st. Dr. Herpin, to whose kindness I am indebted for the preceding details, invited me to see the patient with him. I found her lying on her back, and manifesting that somnolence which is so characteristic of meningitis. When she was spoken to she cried, became agitated, threw herself upon her abdomen, and refused to respond; a moment afterwards she would declare that she had no headache; she kept her eyes closed; the pupils oscillated when exposed to the light; the pulse was unequal, it varied from 108 to 120; the respiration had risen from 12 to 24. The drowsiness passed off during the day, but returned at night. In the evening we administered nine grains (45 centigr.) of calomel; it produced no evacuations; the night was disturbed; there were some convulsive movements about the eye-lids.

Feb. 1*st.* Same condition. Calomel, gr. xij. It produced three copious dejections. After the last, at eight in the evening, the child vomited and grew faint.

Feb. 2*d.* Less drowsiness, less photophobia, less irritability, less contraction of the abdomen; the pulse was regular, at 112. A mercurial fœtor was perceptible in the breath. Calomel, gr. xij. In the evening salivation came on; the child complained greatly of her teeth.

Feb. 3*d.* This was the seventh day. The drowsiness returned; the pulse was regular, at 108, and very compressible. The gums, tongue and cheeks were ulcerated. The calomel was suspended, and a gargle containing laudanum was ordered. In the evening the little patient suffered for two hours from subsultus tendinum. Sulphate of quinia, gr. xij.

Feb. 5*th.* The cerebral symptoms had entirely disappeared, but the ptyalism continued. The pulse beat with perfect regularity at 88.

Feb. 10*th.* Convalescence.

Some months after the cure of the meningitis, a white swelling appeared in the left elbow, with inflammation of the periosteum, and consecutive abscesses. The latter were opened, and the disease subsided, leaving a partial anchylosis of the joint. After recovering from this disease, the child enjoyed good health, and became robust and well developed.

In July, 1849, she began to lose flesh, and became depressed in spirits. From the beginning of October, until the end of the year, she suffered from alternate diarrhœa and constipation. During this period she repeatedly complained of headache.

On the 12th of December, after an attack of indigestion, she vomited.

Dec. 17*th.* Vomiting of aqueous and bilious matter continued during the day. The patient suffered from constipation, which readily yielded, however, to the employment of calomel, and from intense headache, which was at first general, and then located itself in the right eye.

The antecedent history of the case lead us to apprehend a recurrence of meningitis.

Dr. Herpin and I determined to commence the calomel treatment. We gave nine grains daily, and a potion containing acetate of ammonia.

On the 22nd of December, I was inclined to doubt whether meningitis really existed. The pulse, which had been frequent from the commencement, had fallen to 100, and was regular in force and frequency. The patient conversed sensibly, and was not very drowsy. The cephalalgia, instead of being frontal, was confined to the right eye.

Dec. 24th. I found the patient in a satisfactory condition. Appetite had returned, and the cerebral symptoms had subsided.

On the succeeding days, the symptoms rapidly disappeared.

Remarks.—There can be no doubt of the correctness of the diagnosis in this case. The constitution, the hereditary disease, the prodromes, the mode of onset, the nature and sequence of the symptoms were perfectly characteristic. It is true that the affection did not transgress the first stage, and that the symptoms subsided promptly; but the rapidity of the cure, coinciding with the occurrence of mercurial salivation, is a proof of the happy influence of the remedy, rather than an objection to the accuracy of the diagnosis. I have given an outline of the attack which this girl suffered four years after her recovery, purposely to show how exacting I am in requiring the fullest evidence of the existence of meningitis. The reader will perceive, in examining this protion of my observation, the difference between a simple gastric disorder, accompanied by partial cephalalgia, and a true relapse of meningitis, in other words, between pseudo-meningitis and true meningitis.

In the following case, the disease did not pass beyond the first stage, but the symptoms abated more slowly.

Case II.—*A boy of nine years, of delicate constitution, attacked by tubercular meningitis, and successfully treated by sulphuret of potassium.*—Pochat, aged 9 years, was the son of healthy parents; one of his brothers, nurtured in wretchedness like himself, was the victim of scrofula.

Our patient had passed the first two years of his life in a damp apartment; his mother, while she nursed him, had suffered from cold and hunger, and every species of privation.

Pochat had none of the diseases of early infancy, but he had always been subject to diarrhœa from slight causes; he was tormented by this affection the whole winter antecedent to his attack. He fell sick on the 29th of November, 1844; but, during the two months immediately preceding his attack, he had lost flesh, and had often complained of his head; he was depressed at night, and was troubled with nausea and gastric pains, but in the day time, he played about as usual.

On Nov. 29th, he was in the fields watching the sheep, while it was damp and cold; he returned home, complaining of intense frontal headache, and went to bed, after which he appeared very sensitive to sound and to light.

On the second day, he had a loose passage, and vomited freely.

On the fourth day, Dr. Maunoir was summoned, and found that the headache and photophobia continued; the pulse was at 96, the tongue was moist, the abdomen was not tympanitic, there had been one natural evacuation. Dr. Maunoir prescribed three grains of tartar emetic in six tumblers of water; one tumblerful to be taken every two hours.

From the fifth to the eighth day, Dr. Maunoir visited the patient daily. The cephalalgia continued; the colouration of the face changed frequently; the patient was drowsy in the day, and avoided light and noise; the pulse quickened, it varied from 96 to 108. The child did not vomit; he had one or two black or greenish evacuations daily, produced by calomel, six or twelve grains of which were administered daily.

On the ninth day, I saw the patient with Dr. Maunoir. I found a small and somewhat emaciated child, with blue eyes and light hair, but without any traces of scrofula. His eyes were closed, and he was very drowsy. When he was interrogated, he responded naturally, but presently sank again into a troubled sleep. I was struck with the analogy of this somnolence to what is commonly observed in tubercular meningitis. He complained, when he was questioned, of pain in the forehead, and in the legs, chiefly in the right leg, which, however, was neither red nor swollen. There were no other cerebral symptoms. The pulse had fallen to 84; it was regular in frequency, and very irregular in force. The tongue was moist and slightly coated; the abdomen was painless on pressure, and not much swollen; there was no appetite, neither was there thirst; there were abundant deposits in the urine; the respiration was everywhere free, but it was rather feebler on the left in front, than elsewhere. There was no symptom of typhoid affection.

The diagnosis of tubercular meningitis appeared to M. Maunoir and myself, to be clearly established by the prodromes, by the vomiting, headache, photophobia, somnolence, irregularity of the pulse, etc., and, on the other hand, the incurable nature of that disease left us but little hope. We therefore determined to try a new remedy, and we selected sulphuret of potassium, which enjoys a merited reputation in the treatment of croup. The children who suffer from the latter disease, being made of the same stuff, if we may be pardoned the expression, as those who succumb to tubercular meningitis, we inferred from the etiological parity the propriety of similarity in treatment.

We prescribed, therefore, four grains of the liver of sulphur, in four ounces of syrup, a half ounce to be taken every two hours.

The next day, the tenth, the expression of the countenance was improved; the colour of the complexion varied, however; the headache continued; the left pupil was more dilated than the right. The pulse was again accelerated; it beat regularly at 108. Liver of sulphur, gr. viij.

On the eleventh day, the medicine caused two attacks of vomiting, *no stools;* the cephalalgia and somnolence increased, the pulse again became irregular in force and frequency; it varied from 76 to 84.

On the twelfth day, the constipation and irregularity of pulse continued. The respiration was slow; the expression of the countenance was dull and listless. We directed an ounce and a half of castor oil, in two doses. The first dose was given at eleven in the morning, the second at two. The first evacuation took place at eleven at night. There were six dejections during the night, attended by severe griping.

On the thirteenth day, the countenance improved, even when the patient was made to sit up. The pulse was rather more regular. Liver of sulphur, gr. x.

After the fourteenth day, the amelioration was very sensible; the countenance was good; the headache came and went until the 17th. The mind was clear; there was no more somnolence, or grinding of the teeth; the pupils were dilated until the 18th, but they responded to the light. After the 18th, the patient was no longer painfully disturbed by noises.

The amelioration of the pulse was less decided; it continued irregular and slow, until the 22nd day; on that day it was at 68. The next day, it beat regularly at 72, and from that period, it maintained its normal rhythm and frequency.

On the nineteenth day, the child walked about his chamber.

The sulphuret of potassium exercised a remarkable influence upon the urine, notably augmenting its quantity. After the fifteenth day, the patient passed daily 32 ounces of deep coloured urine. This diuresis continued until the 22nd day; on that day the patient passed 38 ounces of clear urine. Constipation continued under the influence of the medicine, and there was some colic; it was necessary to purge with castor oil on the 17th and 23d.

On the 25th, the alvine evacuations became natural, and the child could be regarded as well.

The largest dose of sulphuret of potassium was ten grains; after the nineteenth day, the dose was diminished to one or two grains daily. On the 27th, this remedy was suspended. The patient had taken in all four drachms.

Dec. 29th.—We prescribed cod liver oil, which the child continued to take for more than a month.

Remarks.—I believe that experienced physicians will hardly deny that Pochat was affected with turbercular meningitis; the causes, the prelude, the symptoms, and the progress of the disease, forbid, it appears to me, any other diagnosis. Among the causes, we find anti-hygienic circumstances, collateral scrofulous predisposition, and feebleness of constitution; among the prodromes, emaciation, irregular headache, depression of spirits; among the symptoms, permanent frontal cephalalgia, photophobia, and fear of sound, grinding of the teeth, somnolence, irregularity of the pupils, the characteristic countenance, and slowness and irregularity of the pulse; in a word, the progress and connection of the symptoms was such as is observed in true meningitis.

One symptom alone was calculated to excite doubt. I refer to the loose dejection which occurred on the second day, for the dejections on the succeeding days were the result of tartar emetic and calomel; but the child was, as we have stated, very subject to diarrhœa, and it was hardly surprising that, in cold and damp weather, he should have diarrhœa and vomiting at the same time; moreover the diarrhœa was soon succeeded by constipation, which was only relieved by large doses of castor oil.

But if our diagnosis is contested, what was the disease? Was it typhoid fever? There was not, at any period, either spots or sudamina, or tumefaction of the abdomen, or gurgling in the iliac fossa, epistaxis or disorders of hearing, or cough; not to speak of the precursory symptoms, the countenance was not typhoid, and the constipation and irregularity of the pulse forbad the idea of dothinenterite. The same remarks are applicable to gastritis, enteritis, and *a fortiori* to any verminose affection, for the child never passed any worms. The existence of any cerebral affection other than meningitis is still more improbable; a frank meningitis, an encephalitis, acute softening, an arachnoidean hæmorrhage, whether cerebral or ventricular, would have been accompanied by disorders of the intellect (acute delirium, an ataxic condition) and of movement (carphology, subsultus tendinum, convulsions) which were entirely absent in our patient.

Having decided on the diagnosis, it remains for us to estimate the influence of treatment. I shall not dwell on the action of the calomel and tartar emetic; these two remedies produced their ordinary effects, without influencing the symptoms in an appreciable manner. With the sulphuret of potassium it was different; under its influence, the nervous symptoms were quite rapidly modified, but its most remarkable action was exerted on the urine, the abundance of which was very considerably augmented. This effect continued for several days, and only ceased when the remedy was suspended. It might have been apprehended that perseverance in so energetic a medicine as the liver of sulphur might cause inflammation of the digestive passages, or diarrhœa. It was not so, however; constipation and some slight colic were the only symptoms we noted, and the appetite was better than usual.

The hopeless incurability of tubercular meningitis, and our success with this remedy, induced us to use the sulphuret of potassium with another child, of five years of age, on the thirteenth day of its sickness with tubercular meningitis.

After prodromes of three weeks, and acute symptoms which it is unnecessary to describe in detail, the child was in the following condition when we commenced the treatment. He was lying on his back, motionless, his eyes closed, his cheeks flushed, his respiration slow and interrupted with sighs; there was deep drowsiness; the child occasionally opened its eyes, and then again sank into a slumber. When asked to show his tongue, he opened his mouth, and left it open until told to close it; yet his intellect was good, although it was difficult to make him respond to questions.

The pulse was very unequal; in five seconds, it gave sometimes 7, sometimes 8, and sometimes 9 pulsations; the abdomen was strikingly retracted. We began the employment of the liver of sulphur, in doses of four grains, mixed with four drachms of the oleosaccharate of lemon, a powder every two hours. We continued this remedy, increasing the dose two grains on the second and third days. During these three days the disease pursued its fatal progress; all the symptoms augmented in intensity. The intellect was most obtuse; and it was only after repeated interrogations that the child showed some transient gleam of intelligence. The urine and fœces were passed involuntarily. The sulphuret of potassium having produced no effect, I abandoned the remedy. The child died five days afterwards.

I have adduced this case, in order not to conceal my failure after proclaiming my success; I will observe, however, that the disease was in a more advanced stage in this case than in the other; perhaps the sulphuret of potassium would have been more efficacious, had it been employed from the onset.

(To be continued.)

ART. V.—*Remarks on a Review of Mr. Lawrence's Treatise on the Diseases of the Eye.* By ISAAC HAYS, M. D., of Philadelphia.

An author who ventures before the public has no ground for complaint should his opinions be criticised, his statements closely scrutinized—adverse sentiments upheld, and faults both of commission and of omission be pointed out. But he has a right to expect that all this should be done with entire fairness,—that his opinions be correctly represented, and no unjust charges be made. Such is not the case in the Review of "Lawrence on the Eye," contained in the February number of the Virginia Medical and Surgical Journal. That Review contains so many erroneous assertions, that I trust I ask no more than justice entitles me to claim, in requesting to be allowed to correct those misstatements through the same channel by which they have been presented to the profession.

In making these corrections, I shall endeavour to be as brief as possible, and shall confine myself to facts. I cannot discuss the *opinions* of the reviewer, but leave it to the profession to judge whether the latter will bear scrutiny any better than the former.

1st. The reviewer asserts (p. 420) that "anæmic exophthalmus, an affection to which Dr. Begbie, of Edinburgh, has ably called attention, is barely alluded to."

If you will refer to Mr. Lawrence's work, pages 837, 838 and 839, you will there find an analysis of Dr. Begbie's paper; indeed, with the exception of the details of the cases, I do not think I have omitted an important fact!

2nd. The reviewer states (p. 420) that I say nothing of the practice of incising the conjunctiva in this disease, [purulent ophthalmia] &c.

But he has not had the candour to say that Mr. Lawrence has devoted five pages, (see pages 305, 306, 307, 308 and 309,) to the consideration of this subject, and has left nothing of importance to add.

3rd. The reviewer affirms (p. 421) that I give no directions, which he can discover, for the employment of the catoptric test, (Purkinje's experiment.)

The work has a copious index, and if the reviewer had consulted it, or if he had read the work he reviews, he would have found, at pages 93 and 94, all that need be desired relative to that subject.

4th. The reviewer asserts (p. 421) that "Though sound surgeons are now almost unanimous in condemning ocular myotomy, except in rare cases, Dr. Hays makes it the rule, and even operates on a boy of hæmorrhagic diathesis, whose life had previously been in danger several times from hæmorrhage, after slight injuries."

Here are three allegations. We must consider them separately:

If Mr. Haynes Walton, Dr. MacKenzie, Mr. Pirrie, the late Mr. Dalrymple, Mr. Lawrence, Mr. Fergusson, Mr. Miller, Mr. Duffin, &c.

&c., be not considered sound surgeons, then I must be content to bear with them the censure implied in the first allegation.

But I deny that I make operating the rule. I have denounced, in the strongest language, the indiscriminate performance of the operation, (see pages 896, 897, 898, 899.) I have endeavoured, most carefully, to point out the kind of cases to which it is suitable, and those in which it is unsuitable; (see pages 881, 882;) and I have said nothing more in favour of the operation in suitable cases than have Messrs. H. Walton, MacKenzie, Pirrie, Velpeau, &c.

The assertion that I operated upon "a boy of hæmorrhagic diathesis, whose life had previously been in danger several times from hæmorrhage, after slight injuries," is not the fact. I have never operated on any such case; indeed, I have never heard of but one such—the case of Mr. Lane, (well known, I had hoped, to all ophthalmic surgeons,) recorded in the *Lancet*, for October 31st, 1840, and noticed in Dr. MacKenzie's valuable "Treatise on the Diseases of the Eye," Appendix p. 30. The allusion I made to that case, (see p. 882,) could not mislead any one (not determined to misunderstand) into the supposition that it occurred in my practice.

5th. The reviewer asserts (p. 422) that "In the treatment of obstructions of the lachrymal passages" I advocate "a steel wire, closely analogous to an hair pin, as a proper instrument for traversing the delicate lachrymo-nasal passage."

Such is not the fact. After quoting Mr. Travers' description of the "*silver probes*" used by him for restoring the lachrymal passage in cases of obstrution, (see p. 919,) I mention the form I generally prefer for such probes, and describe and give a figure of the latter. (See pp. 920, 921.) I have never used or advocated "a steel wire" for traversing the delicate lachrymal passage. The fact that I allude (p. 922) to, a case of *congenital closure* of a portion of the lacrhymal canal, in which I made an *artificial* opening in the situation of the natural canal, into the sac, with a sharp steel wire, affords no ground for the reviewer's statement. In that case an artificial canal was to be made, not the delicate natural passage to be traversed; and I distinctly state that after I felt the point of the instrument free in the lachrymal sac, I withdrew it and introduced "a silver probe." So likewise in another case in which the lower punctum and lachrymal canal were *obliterated* we made an artificial passage with a steel instrument as far as the sac, and then introduced "a silver probe," p. 922.

I might point out other errors, but they are of minor importance, and some uncandid criticisms, as for instance the allusion to the omission of any notice of Kölliker and Müller's researches on the structure of the retina published in the *Comptes Rendus de l'Acad. des Sciences*, Sept. 1853. It may be some extenuation of my sin of omission in this instance that Mr. Lawrence's work was finished before an account of these researches reached me; indeed the anatomical part of the volume was printed off before those researches were even communicated to the French Academy of Sciences.

ART. VI.—*Report of a Case of Ulceration of the Cervix Uteri, with Remarks on the Treatment of Non-Malignant Diseases of the Uterine Neck.* By WILLIAM READ, M. D., Physician to the Boston Lying-in Infirmary.

CASE.—*Oct.* 24*th*, 1852. Mrs. G—— is the mother of three children. Her father died of phthisis; her mother is still alive and healthy. Her figure is slight; she is of sanguine nervous temperament, and is predisposed to pulmonary disease; she has almost constantly a slight cough, and expectorates freely.

She now complains of pain in the abdomen, which is aggravated on pressure; there are no other indications of inflammation. The tongue and pulse are natural. A dose of castor oil, and the topical application of spirits of turpentine, relieved these symptoms, and Mrs. G—— was apparently convalescent.

Oct. 26*th*. I was again called, and found the patient suffering from severe pain in the side with difficulty in respiration. She was also labouring under profuse leucorrhœa, and suffered excruciating pain during defecation. I was led to refer the seat of the trouble to the uterus, and suggested an examination, which was acceded to. There was great pain about the ovarian region. The cervix uteri was enlarged and apparently ulcerated. I was not allowed to satisfy myself on this point by the use of the speculum. I directed a suppository of opium to be placed in contact with the uterine neck.

Oct. 27*th*. Pain considerably alleviated; menstruation commenced yesterday.

Nov. 4*th*. Menstruation ceased on the 2d; it was painful, and the discharge contained coagula. The patient has had several paroxysms of pain in different regions, chiefly in the left hip. Apply another suppository.

Nov. 6*th*. Patient is improved; she was purged yesterday with castor oil, and suffered no pain from the passage of the fœces. Leucorrhœa still profuse.

Nov. 7th. The patient has suffered considerably since yesterday. I ordered a drachm three times a day of the syrup of helonias dioica, a vaginal injection of white oak bark and alum, an ounce of the former and four drachms of the latter in a pint of water, a cold wet compress over the abdomen, and a cold sitz bath every morning.

Nov. 8th. Examination with the speculum. Vulva not much inflamed. As the speculum was introduced, about a third of an ounce of thin purulent matter from the walls of the vagina collected in it. The vaginal mucous membrane was injected, but exhibited no ulceration. The cervix uteri was too large to enter the field of the speculum, and was of the same heightened colour as the vagina. A large excavated ulcer, cherry red and free from coating, encircled the os tincæ. I applied the solid crayon of nitrate of silver to the ulcer for its escharotic effect, and then touched as much of the cervix as could be reached with the strong tincture of iodine.

Nov. 11th.—No leucorrhœa, mucous membrane less injected, slough from cauterization not entirely separated. *Has had little or no pain since the caustic application.* Spirits improved; the patient thinks that she derives relief from the compress. I applied four leeches to the uterine neck.

Nov. 15th.—Ulcer much diminished in size; the slough has separated. The cervix is much decreased in bulk; there is a free discharge of pus from the cavity of the cervix, which appears to be the seat of an ulceration. The patient can walk about with comparative ease, and suffers but little pain.

Nov. 18th.—I applied the solid nitrate of silver to the cervix and within its cavity.

Nov. 22nd.—Patient complains of severe pain, of a paroxysmal character, principally on the right side, from the hip to the knee. There is still some ulceration on the right side of the os uteri, which is very sensitive at that point. I applied the strong tincture of iodine, and directed an opiate suppository to alleviate pain.

Nov. 29th.—Patient has had much pain since last visit; the pain is confined to the right side. There is great tenderness in the hypogaster, to the right of the median line. In the right inguinal region, there is a hard swelling of the size of a hen's egg. There is a profuse purulent discharge from the vagina, and some pain in defecation. The catamenia came on yesterday. I ordered forty drops of elixir of opium *pro re nata*, and hop poultices to the seat of pain. The following combination was substituted for the prescription of Nov. 7th: ℞. *Potass. Hydriod.* ℥ss. *Ferri Iod.* ʒss; *Fluidext. Sarsap.* ℥viij. *M. Sumend. coch. parv. ter in die.*

Nov. 30th.—Much better. Good appetite, no pain, walks with freedom. Continue treatment.

Dec. 6th.—No trace of ulceration or discharge. No pain in defecation. Has gained flesh since the commencement of the treatment. Swelling in groin is diminished in size. Apply the following ointment to swelling: ℞. *Iodinii*, gr. vj; *Potass. Hydriod.* gr. xij; *Axung.* ℥j, *M. ft. ung.*

Dec. 9*th.*—Found patient engaged in her domestic affairs. She can go up and down stairs without inconvenience. She is free from pain, and from that despondency which once harassed her.

Dec. 23*d.*—Well.

March 20*th*, 1854.—Up to this date the patient has had no return of her disease, and her health has been uniformly good.

The antecedents and progress of the case reported above, afford a fair illustration of the tendency of lesions of the cervix uteri to develope symptoms which have no apparent connection with the actual malady, and which, without the judicious use of the speculum, must inevitably lead to a false diagnosis, and inappropriate course of treatment. Instances in proof of this statement have probably occurred to every physician, in which, for want of a definite test, long courses of medication have been pursued to no purpose, while the real disease, unrecognized, still acting, has, as often as one set of symptoms have been relieved, hung out signals of distress in another direction. And yet, from their complete subsidence after proper treatment, we are justified in referring all of these symptoms, however incongruous, to a common source.

In the treatment of this class of diseases, escharotics varying in strength from the mildest application of the nitrate of silver, as a topical stimulant, to the severest form of caustic, which shall entirely destroy the tissues with which it comes in contact; strong tincture of iodine as a resolvent; leeching, the cold hip bath, when it can be borne, wet compresses to the utero-abdominal region, with rest, are mainly to be relied on.

In addition to the above remedies, there is another, which has hardly been allowed from the profession at large, the importance to which it can justly lay claim. I refer to the root of the Helonias Dioicia, popularly known as Unicorn Root, and under that name the active principle of many of the nostrums of the day for the cure of uterine diseases. Dr. Braman of Brighton, Mass., more than four years since, in a communication to the Boston Med. and Surg. Journal after nine years trial of its efficacy in his own practice, remarks of it "as particularly applicable to such affections as have their origin in atony of the generative organs of both sexes—particularly the female." The experience of others has confirmed this statement; this drug is worthy of a prominent place in any treatment for debility of the utero-generative organs, particularly in uncomplicated leucorrhœa, in which it acts almost as a specific, abating the discharge in a very short time. A most convenient form for its exhibition is the syrup made of the strength of ℥ij of the root to a pint of syrup, of this ʒij three times a day will be found to be readily borne by the stomach and not very repulsive to the taste. It may also be administered in powder, of which the dose is ʒjss; or the tincture in doses of ʒj, at the same intervals observed in prescribing the syrup.

The value of the hip bath has been greatly underrated. It acts in these complaints as a powerful sedative and tonic also, allaying the uncomfortable feelings that attend these diseases, and giving a vigour and tone to the organs that precludes the necessity of supporters, which, instead of remedying, rather increase the evil they are intended to counteract. Indeed, it is a matter of much doubt whether the uterus is, in reality, supported by any ordinary external pressure which can be borne with ease and comfort. Experience has proved that after the first feeling of lack of support which follows the disuse of the supporter, has passed away, patients are more comfortable without than with them. In addition to its immediate effect, the bath taken in this manner operates also prospectively, fortifying the system against relapses, which under all kinds of treatment, are to be dreaded. The temperature of the bath should be about 50°, when it can be borne, but in no case should it be so low as to prevent complete and satisfactory reaction after its use. Its duration, at first, should be short; commencing with about five minutes, it should be gradually lengthened until it can be borne for half an hour, without discomfort; the water as it becomes warm meanwhile being changed for cooler. The best time for taking it is in the morning, immediately after rising, before the system is debilitated by fatigue; and when used with these precautions, will be found to be refreshing and grateful in the highest degree. The compress should be worn in front or over the sacro-lumbar region, as the symptoms and sensations indicate, wetting it as often as it becomes dry, and guarding against too speedy evaporation, by covering it with oiled silk or some other impervious material. Should any eruption follow its use, which usually happens, sooner or later, it may be suspended for a time. Leeching and tincture of iodine have for their ultimate end the same object, the restoration of the cervix to its normal size—and must be resorted to as circumstances indicate their necessity. It may be well, however, to continue the application of the iodine for some time after the apparent removal of the condition which led to its use.

Much has been written pro and con as to the use of the speculum in these cases. Experience proves that its employment is necessarily attended with no greater shock to the delicacy than the ordinary tactile examination in obstetrical cases, while no one will deny that ocular inspection of the conditions of the internal organs is often of the highest importance, and the ability to convey remedies to the seat of disease the *sine qua non* of successful treatment.

But while there is nothing in the non-malignant diseases of the utero-generative organs or their treatment, which should deter any member of the profession from undertaking their management; for no diseases so surely yield to proper remedies, and in none is the relief so evident, and thankfully acknowledged—there is no class of disorders which call fora more active exercise of the judgment. Without this, any one who follows a routine treatment, will assuredly fail in many cases, while the employment of the same remedies for all, inevitably leads to suspicion as to the honesty or knowledge of the operator.

ART. VII.—*Statement of the Cases of Small-Pox treated at the City Hospital, Richmond, during February and March,* 1854. By ALBERT SNEAD, M. D., Physician to the Hospital.

GENTLEMEN: In compliance with your request, I send you the following brief report of the cases of variolous disease that have been treated in the City Hospital since February 1st, the date of my appointment as physician to that institution.

These cases are only four in number. Of these, one was a case of distinct small-pox, one of confluent varioloid, one of simple distinct varioloid, and one of confluent small-pox.

The three first mentioned passed safely through the disease, and in due time were discharged. The case of confluent small-pox terminated fatally on the twenty-first day of the eruption. In this case the eruption progressed regularly for twelve days, on all parts of the body, except on the legs, from the knees to the ankles, over which surfaces the pocks were always flat and badly filled, and the interspaces purplish. On the thirteenth day these interspaces vesicated and filled with bloody serum. In twenty-four hours the vesicles burst and discharged their contents, the interspaces drying, yet the pock remained flat and unsatisfactory in appearance. From this time, the fourteenth day, the pock instead of drying up and scabbing over, softened down, and in parts where the eruption had been distinct two or more would coalesce. The patient became at intervals delirious, and I grew anxious for the result. The difficulty to me appeared to arise from the supervention of a sub-cellular inflammation at the time the pock should have dried. The patient gradually grew worse, and died on the twenty-first day of the eruption from nervous exhaustion.

There is at this time no case of variola in the hospital, and I believe none in the city.

CLINICAL LECTURES.

I. *A Clinical Lecture on Uterine Hæmorrhage. Delivered at the Hôpital des Cliniques,* January, 1854, by Professor PAUL DUBOIS.

I shall speak to you to-day of a most serious accident, of a complication of labour which always excites the dread of the accoucheur: I refer to uterine hæmorrhage. For my part, I never attend a labour without some apprehension of this accident, and I never enjoy complete security until delivery is accomplished.

You saw here, a few days since, a woman in whom flooding occurred immediately after delivery. The fœtus had been removed by the forceps, which were applied by one of the students without any difficulty. A considerable quantity of blood escaped as soon as the child was delivered, and I advised the student to introduce his hand into the womb to remove the placenta. He appeared to hesitate, and I therefore introduced my own hand, and with some difficulty detached the placenta. Still the hæmorrhage continued, although the uterus was hard and contracted firmly. It was necessary to have recourse to certain hæmostatics which I shall presently describe, in order to arrest the flooding.

While this case was before you, I had occasion to observe a similar disaster in a young woman who had come to Paris to be confined. This lady had already lost two children during labour, and the fear lest the same catastrophe should occur a third time had induced her to come to Paris to be delivered. I was at once struck by a slight puffiness about her face. I ordered that her urine should be preserved, and found that it contained albumen. I did not, however, attach any great consequence to this circumstance. Some days afterwards, I was called to see this lady, and finding her complaining of headache and great oppression, I ordered that she should be bled freely. The husband enquired if this would not hasten her confinement. I answered that this was possible, but that it would do no harm. In fact, a few days subsequently I was summoned to deliver her. Every thing occurred naturally; nevertheless, on account of the oppression which still existed and the fear that it might prove injurious if the labour was protracted, I applied the forceps and delivered a living child. I apprehended an hæmorrhage, because there was terrible flooding in both of her former labours. As soon as the child was delivered an alarming hæmorrhage came on. I hastened to remove the placenta, but the hæmorrhage continued so abundantly as to cause me the liveliest anxiety. At last, however, it was arrested. I ought to mention that I administered ergot before applying the forceps.

The simultaneous occurrence of these two cases of an accident which, unfortunately, you will often encounter in practice, has induced me to call your attention to this important subject.

You are well acquainted with the vascular connections of the uterus and placenta; you know that numerous small and tortuous arteries pass from the womb to the placenta (?), and that numerous venous sinuses open upon the latter. There are, therefore, many arteries and veins which may furnish blood; most commonly the hæmorrhage takes place chiefly from the veins. Why from the veins rather than from the arteries? Because the arteries are small and tortuous, and are subjected by the separation of the placenta to a modification which we have imitated by one of our methods for arresting arterial hæmorrhage (torsion.)

But, you will ask, why, with an anatomical arrangement so favourable to the loss of blood, hæmorrhage does not occur more frequently? why it does not always occur? There are two reasons. The first, in my opinion, is that the attractive power which during pregnancy constantly excites a determination of blood towards this point, has ceased in consequence of the expulsion of the ovum. Independently of this, there is another reason, which is the contraction of the uterus, which occasions most important modifications in the condition of parts. The calibre of the vessels is diminished by compression and their natural tortuosity is greatly increased.

What then are the causes which produced these hæmorrhages? Evidently the absence of the conditions I have described. If the blood continues to flow towards the uterus with the same force as during pregnancy, an impulsion which is too violent for the new conditions in which the woman is placed after the expulsion of the products of conception; or if, on the other hand, the uterus does not contract and the vessels consequently preserve their calibre, we have the two essential and necessary causes of hæmorrhage.

Are there peculiar circumstances or special causes which realize the conditions I have supposed? Undoubtedly. A plethoric patient, in whom the impulsion of the blood is usually exaggerated, is predisposed to puerperal hæmorrhage. She realizes one of the conditions of which I have spoken,—the persistence of that attractive power which I have described.

There are other cases in which local causes produce the same results: a foreign body, the presence of a coagulum in the uterus. Finally, there are women in whom this increased impulsion of the circulation occurs in circumstances in which it cannot be attributed either to a plethoric constitution or to any local causes. These cases are inexplicable anomalies.

A comparison borrowed from a fact appertaining to obstetrics, will illustrate what I have said. If the umbilical cord is divided before a ligature is applied to it, a little jet of blood escapes, and then the flow is arrested. The retraction of the vessels has something to do with this result, no doubt, but this is not a sufficient explanation of the phenomenon. The cord has become useless; it no longer terminates in a placenta; the attractive power has ceased; in a word, life is extinct. The same thing occurs in the uterus; the blood ceases to flow in both cases because the power which impelled it no longer exists. In some cases blood continues to flow from the open orifice of the umbilical cord, because there exists one of those abnormal conditions, one of those causes of increased vascular action which maintain the flow of blood in women after parturition.

Thus much for what concerns the circulation.

It is commonly and justly admitted that in women with flaccid tissues, the uterine contractions are feeble and insufficient; this is evidently a predisposing cause of hæmorrhage; this was the organization of the woman whose case I have related.

Another predisposing cause of hæmorrhage is the distension of the uterus by a very large child, by twins, or by a large quantity of amniotic liquid. The fatigue of a protracted labor may induce the same result. There is another circumstance which may produce a tendency to hæmorrhage. I refer to the constitution of the uterus itself. You have heard me speak of women whose wombs were sluggish, and contracted but partially, and only accomplished half of their work. This depends on a defect in organic contractility; it is one of the most frequent causes of hæmorrhage.

There are, then, two kinds of uterine hæmorrhage, depending upon insufficient uterine contraction, or upon excessive force in the circulation, both of which it is important to understand.

The blood first flows into the uterus, that is to say, into a small cavity with contractile walls: then into the vagina, a non-contractile cavity; so that what appears externally is only the overflow or surplus of the blood contained within. The vagina usually contains more blood than the uterus, on account of its greater distensibility. Occasionally blood accumulates chiefly in the uterus. This takes place, for example, in those cases in which a coagulum adheres to the uterine neck and retains the extravasated blood. But this, I repeat, is an exception; under ordinary circumstances, the vagina always contains the most blood.

As the blood flows, the woman grows weaker; and it is this gradual sinking which usually awakens a suspicion of hæmorrhage. Sometimes the woman is not aware that she is flooding; the accoucheur detects it while making an examination, or by noticing the pallor of his patient's countenance; and it is only when she is apprized of what is happening that the woman remarks that her vision is indistinct, and that her strength has gone. This feebleness is soon followed by syncope, and an arrest of the hæmorrhage, which returns, however, when the circulation is re-established.

In some fortunate cases, hæmorrhage arrested by syncope does not return after the patient revives, and the evil thus becomes its own remedy. This must occur in a considerable number of cases even; for, in the country, where women are usually confined without the assistance of art, flooding is as common as elsewhere, yet these women, in whom hæmorrhage is unchecked by medical interference, do not all die. Yet we should not yield to any delusive confidence on this score; the flooding is usually suspended only momentarily by a swoon; it returns and the patient faints again, till at last, after successive syncopes she complains of great præcordial anguish, has several convulsions, and dies.

Sometimes, after escaping immediate death from hæmorrhage, women succumb under its consequences in two, four, ten, or even fifteen days. Death is rare, however, at such a late period. I have never observed it, but other accoucheurs have witnessed these tardily fatal terminations.

The treatment of puerperal hæmorrhage offers two principal indications: 1. To induce the uterus to contract; 2. To diminish the activity of the uterine circulation.

There are two methods of inducing the uterus to contract: the administration of the secale conutum, and the introduction of the hand into the uterus. The means of diminishing the force of the uterine circulation consist principally in the internal and external use of refrigerants.

(*To be Continued.*)

II. *Lecture on Hernia.* By Professor MALGAIGNE.

The frequency of hernia is so remarkable, that many authors have made it a subject of enquiry with the view of estimating it with some exactness. A glance at some of the estimates which have been made in different countries, at different periods, will suffice to show the discrepancy of the opinions which prevail on this question.

According to Arnaud, the proportion of persons affected with hernia is an eighth of the whole population; Bordenave formed an equally exaggerated estimate when he placed the ratio at one *per cent.* Louis concluded, from researches among the children of *La Pitié*, the women of *La Salpetrière*, and the men at *Bicêtre* and the *Invalides*, that among children one in fifty, among women one in thirty-two, among men one in seventeen or eighteen, were afflicted with this infirmity.

Juville declares that in Germany and in the North, one in thirty labour under hernia; in Italy and Spain, one in fifteen; in France and England, one in twenty. Juville furnished the army with trusses, and distributed annually 3000 bandages to an effective force of 120,000.

In England, Scheldrake asserted that persons affected with hernia constituted a tenth of the entire population. Knox, on the other hand, deduced from certain documents that they amounted only to one hundredth.

The objection to all of these statistics is found in the fact that they concern special classes of the population, and make no distinctions of age or sex. The problem ought to be examined under the triple point of view of the frequency of hernia in proportion to the whole population, and their comparative frequency in the two sexes and at different ages. Documents for an investigation of this sort are found in the records of the central surgical bureau of Paris, which distributes two or three thousand trusses annually, and in the report of the recruiting service, published by the minister of war, which gives the exact number of cases of hernia in individuals between 21 and 22 years of age.

According to the statistics of Louis, there are two men affected with hernia for one woman. According to John Monnikoff, herniary surgeon at Amsterdam, three men to one woman. Mathey, herniary surgeon at Antwerp, says four to one; and, lastly, the truss-makers of London estimate the proportion at six to one. It is important, however, to recollect that English women have a great repugnance to submitting to an examination of the parts which are the seats of hernia, which fact should be seriously taken into consideration in a statistical point of view.

In October and November 1835, I examined 410 persons affected with hernia, of whom there were 335 men and 75 women. The ratio then is 4½ to 1. During the year 1836, in 2767 cases of hernia, there were 2203 males and 594 females; which makes the proportion 4 : 1. During the year 1837, the whole number of patients affected with hernia was 2373, of whom 1884 were men, and 489 women, the proportion remaining the same. From these three calculations we may conclude that among the lower orders of Paris the relative frequency of hernia in man and woman is as four to one.

The influence of age upon the frequency of hernia is shown in the following tabular statement of the ages of 2365 patients examined at the central surgical bureau in 1837:

From 0 to 1 year, - -	38	From 13 to 20 years, - -	83
" 1 to 2 " - -	36	" 20 to 35 " - -	306
" 2 to 3 " - -	18	" 35 to 70 " - -	1558
" 3 to 4 " - -	10	" 70 to 75 " - -	150
" 4 to 5 " - -	13	" 75 to 80 " - -	80
" 5 to 13 " - -	51	" 80 and over.	

The cases of hernia occurring from birth to one year of age constitute therefore, one fiftieth of the whole number. These are chiefly the (so-called) congenital hernias, which take place early in life before the inguinal canal is obliterated. The diminution in the number of hernias from 5 to 13 years is very striking. There are three explanations of this decrease: either parents neglect to bring their children to the central bureau; or else a considerable number of hernias are cured during this period; or, lastly, the mortality of children labouring under this infirmity is greater than that of other children.

After deciding in a general way the ratio of hernia according to age, the question arises whether this proportion is the same in the two sexes. The following table furnishes the necessary documents for the determination of this important question:

Years.	Males.	Females.	Ratio.
From 0 to 1 -	78	15	1 : 5
" 1 to 2 -	45	14	1 : 4
" 2 to 3 -	32	6	1 : 5
" 3 to 4 -	20	5	1 : 4
" 4 to 5 -	18	4	1 : 4
" 5 to 13 -	98	18	1 : 5
From 13 to 20 -	159	15	1 : 10
" 20 to 25 -	537	115	1 : 4
" 35 to 40 -	418	100	1 : 4
" 40 to 50 -	722	242	1 : 3
" 50 to 70 -	722	242	1 : 3
" 70 and over,	427	84	1 : 5

It is between 13 and 20 years, therefore, that the difference in the frequency of hernia in the two sexes is most conspicuous. This result is probably due to the fact that it is during this period that little girls become young ladies, and no longer engage in boisterous sports; boys are not constrained by the exigencies of sex to observe the same decorum. From 20 to 25 years, the period of marriage and pregnancy, the frequency of hernia in females augments.

We now come to consider the relative proportion which the number of persons affected with hernia bears to the entire population. The statistics of the recruiting service furnish data for this computation. These tables indicate the absolute number of males from 2 to 21 years of age labouring under hernia, and as we have already determined the relative frequency of hernia in the sexes and at different periods of life, we may thus complete our statistics.

The first attempt of this sort was published by Knox. It is founded on the results of the recruiting service in France during 1831, 1832, and 1833. It is not an exact estimate, because the requirements of military service at that period did not necessitate the enrolment of every individual between 20 and 21 years of age.

By examining the reports of the minister of war in connection with the statistics of De Chabrol this source of error is avoided. The former document places the ratio of persons of 21 to 22 years labouring under hernia at one in 36.87. But as the lame and blind, the sons of widows, etc., are exempted from this category of recruits, and though they may labour under hernia the fact is not ascertained, it becomes necessary to correct this estimate. By the most careful computation the proportion of persons between 20 and 21 years affected with hernia is found to be 1 in 32. It is easy to calculate from these figures the frequency of hernia in the entire population. We compute, accordingly, that in France one individual in twenty is affected with hernia; or, 1,700,000 cases of hernia in a population of thirty-six millions.

Some of the elements of these statistics have been deduced from observations among the poorer classes. Should we have the same results from an investigation among persons of higher social position? Richerand has mentioned that hernia is more common in the faubourgs St. Marceau and St. Antoine than in the fourth arondissement. By dividing the twelve arondissements of Paris into three categories, we find that, in the four wealthy arondissements, there is one case of hernia for every thirty-seven inhabitants; in the four arondissements inhabited chiefly by the middle classes, 1 in 37; in the four poor arondissements, 1 in 28. So that poverty has an incontestable influence upon the development of hernia. Another circumstance confirms this proposition: in the suburbs (banlieue) which are poorer than Paris, hernia is rather more common than in Paris. M. Hutin, the late surgeon-in-chief of the *Invalides*, informed me that of 177 officerin that establishment, 34 or 19.50 *per cent.* were affected with hers nia, while among the soldiers the proportion was 21.15 *per cent.* At the hospice of Bicêtre, of 200 men from 20 to 50 years of age, 62 had hernia; of 192 men between 50 and 60 years, 87 had hernia; in 1452 men upwards of 60 years the cases of hernia reached the astonishing number of 992; or, briefly: 1844 men, 1441 cases of hernia. If we substract 160 cases of what are called *inguinal points*, that is commencing hernias, there still remain 981 hernias, or 1 for every 2 individuals of the poor population of Bicêtre, an enormous ratio compared to that of the entire population.

As to the influence of locality and race upon the development of hernia, we find by examining the statistics of the 86 departments of France, that there are 32 departments in which the number of hernias exceeds the mean; these departments lie principally in valleys, though there are some exceptions to this rule. The population of Brittany, which belongs to the race of Cimri (*race kymrique*), presents fewer cases of hernia than any other. In Maine and Anjou, which are peopled by a mixed race, the proportion of hernias is greater. In Normandy also, where the ancient population has been replaced or commingled with the Danish race, hernia is common. The Belgians or Flemings predominate in the north, and hernia is more common there than in Picardy and Artois. The Gallic or Gallo-roman race is found in the centre of France, and hernia is there very common.

The facts which have thus been set forth may be readily summed up in a few general propositions.

1. the number of persons affected with hernia equals one twentieth of the entire population, which gives a total, in France, of 1,700,000 cases of hernia in a population of 36,000,000.

2. Men are four times as subject to hernia as women.

3. This proportion is maintained in infancy. After 5 years until 12 years, boys are five times as liable to hernia as girls; ten times more

liable from 13 to 20 years. The ratio of 4 : 1 returns in adult life; and in old age the proportion sinks to one third.

4. Hernia is very common at birth. One boy in twenty and one girl in eighty are found to labour under hernia a few hours after birth. The number of hernias diminishes from 5 years to 13, and the ratio does not equal that at birth until towards the age of 30. After this date the frequency of hernia augments rapidly; among males, one individual in four between 60 and 70 labours under hernia; from 70 to 78 the proportion is nearly 1 in 3; after this it sensibly diminishes.

5. The poor are more liable to hernia than the rich.

6. In France, race has such a marked influence over the development of hernia, that we find that this infirmity is four times as common in Flanders and Poitou as in Brittany.

As to the frequency of hernia in foreign lands, we find that in England it is estimated that one fifteenth of the whole population labour under ruptures of some kind. Sir Astley Cooper made the ratio much greater, and said that he rarely dissected an aged person without finding an hernia. In Switzerland and Holland hernia is frequent. At the Cape of Good Hope, it is so common as not to be considered a cause of exemption from military duty. In Egypt, according to Dr. Clot-Bey and the English physicians who have visited that country, hernia is extremely common. Knox affirms that this lesion is uncommon among the African negroes; but Dr. Marshall declares that this race is very subject to exomphalos. A physician of Louisiana has informed me that umbilical hernia is also very common among the negroes of that State, but that inguinal and crural protrusions are also common. M. Semur, of the Island of Bourbon, remarks that inguinal and crural hernias are rare among the negroes, while umbilical hernia is so common among the Mackouan negroes, that it is usual to distinguish the individuals of that race by the existence of this infirmity alone; he adds that these protrusions very rarely become strangulated.

(*To be Continued.*)

III. *Lecture on Generalization and Localization in Disease.* Delivered at the Opening of the Course of Clinical Medicine at *La Charité*, November 1853, by Professor Piorry.

Medicine, when considered as a whole and in its numerous applications, has for its object the determination, from anatomical, physiological, chemical, and physical facts, of the condition of all parts of the organism, carefully investigating the causes of morbid processes, enquiring into their reciprocity of action, and considering the relations of lesions and disordered actions, in order to arrive at an appropriate treatment.

I publicly taught these doctrines for twenty years in my lectures on physiology, in which the reciprocal influences of organs and functions upon each other were investigated. I announced them elsewhere with equal confidence,* and have developed them at length in my *Treatise on Practical Medicine.*† I have there investigated not only the principal organopathic state, but I have dwelt upon the circumstances in which it is found, and upon the conditions which depend on it.

These facts have been misunderstood; adversaries have arisen and have declared that I made analysis and nothing more with my new nomenclature and my enquiries into the pathological conditions of organs. They say that I have dissected disease to find its different elements, and that in examining morbid states the unity of disease has escaped me.

They reproach me for not *generalizing;* but do those who boast of always generalizing really deal in conscientious synthesis? Does not generalization consist, after all, in combining isolated facts and scattered details? If we look back to the epoch of Broussais and to the period of the great reform in which he was the prime mover, or still farther back to the epoch of Morgagni, how do we find that generalization was carried on? Had anatomy furnished the data on which a generalization might be based? No; autopsies had not yet illuminated medicine by the light of its positive facts, and the science which they nurtured was still in its cradle. Let us go still farther back and examine the Nosology of Cælius Aurelianus: anatomical knowledge is wanting, and we find instead pompous generalizations deduced from a few isolated symptoms. The heat or coldness of the skin, the expectoration, difficulty of respiration, and pain, which is always made to play a principal part, these isolated, and consequently valueless symptoms, are coupled or grouped in categories, and, names being given them, disease are constituted, and this is called generalization.

You may believe, perhaps, that this system has been abandoned? No; magnificent descriptions are still compiled of what are called diseases, and the pupil is continually deceived by these glowing pictures, which represent symptoms only; now the symptoms of to-day will not resemble the symptoms of to-morrow. Hence, as an inevitable consequence, he falls into the system of Pinel, which provides a treatment for every category of symptoms.

To judge of the investigation of disease we must know what disease is and what it has become. Some suppose that it is an entity which causes disorders in the organization, which are manifested by uniform series of symptoms. Meanwhile a vital principle watches over the economy and exerts a recuperative power, so that the disease pursues a regular progress. These ideas, which some incorrectly impute to Hippocrates, are the doctrines of Stahl blended with some chemical and mechanical notions. It is especially necessary to remark the *vis medicatrix* which is rendered subordinate to the vital principle. At last a voice was heard amid this nosological mysticism: *there are no such things as diseases, there are only diseased organs.* When he was attacked, Broussais yielded to the general enthusiasm, and devoted himself almost exclusively to the study of irritation in its different forms. The ideas of Broussais became obsolete, but they could not long remain in oblivion. Immense additions were made to the labours of Morgagni. Laënnec gave mediate auscultation to the world; nevertheless Laënnec generalized. We find him studying angina pectoris, (which, after all, is only a thoraco-brachial neuralgia,) dry and moist catarrh, pituitous catarrh, etc. Laënnec was faithful to tradition, and studied after the fashion of his predecessors. Have those who boast of their generalizations profitted by his labours, have they taken anatomical facts for the starting point of their syntheses? They believe that the diseases of organs are only the expression of a general morbid condition which is almost foreign to the organization. They say that we do not attach sufficient importance to the blood; our researches upon the alterations of the blood have triumphantly responded to this reproach. They have been driven from the nervous system by the researches of MM. Durand-Fardel and Rostan, and have been compelled to localize in spite of themselves; while they admitted essential fevers, MM. Bretonneau, Chomel and Louis were studying the local lesions of the small intestines.

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* Vide Art. Mutuel. *Dictionnaire des Sciences Médicales.*

† *Traité de médecine pratique, et de pathologie iatrique et médicale.* Paris 1841, 1848. 8 vols., octavo.

There is no localizer or organicist who does not admit general affections to a certain extent. Do not the affections of the nervous system and the alterations of the blood induce general phenomena? If, for example, blood is abstracted, or a poison is introduced into that fluid, if the spinal marrow is wounded, or a tumour compresses the medulla oblongata, we have to investigate general phenomena; every organicist is willing to admit this.

What becomes then of generalization? Can this doctrine consist in reviewing the history of disease and studying only symptoms? No; it is now impossible to construct a synthesis after this fashion. Must we admit an immaterial principle, separate from the organization, though presiding over it. We admit the existence of the soul, but the soul cannot be diseased in a medical point of view. There is no basis then for this pretended generalization.

As to vital forces, and vital properties, they are inherent in matter. It would therefore be proper to study the diseases of vital forces! But can generalization be metaphysical? No; its elements must be found in the human body. What we deny is the existence of any essential general disease, always producing the same phenomena. We recognize, it is true, certain identical causes, such as the syphilitic poison. But this virus is not the disease; it produces a general morbid condition, an alteration of the blood, which is always of the same nature, but the phenomena which result from this condition are infinitely varied, and consist in a great number of local lesions, each of which requires separate study.

If we seek for the elements of disease in the morbid condition of organs, and study each of these elements in detail, the anatomical state will furnish therapeutical indications, provided we examine how one lesion has influenced another, and take into consideration all the causes of the disorders which are present. Take, for example, a man labouring under typhoid fever: he has diarrhœa because there are irritating matters in the intestine; but what is the cause of this fœcal accumulation? Are not the glands of Peyer diseased? Yes; they are ulcerated; the ileospilocia, then, is the starting-point of the first two morbid conditions. But the ileospilocia itself is no more a local disease than the pustule of variola. The man has had chills, and then heat of surface; the general phenomena continue. It is easy to recognize septicæmia; we are confirmed in this opinion by the replies of the patient, who, probably, has recently arrived in Paris, and has been deprived of the pure air and good diet to which he was once accustomed. The spleen is also diseased, either as a consequence of the sepicæmia or as an effect of miasmatic influence. Now we have some materials for synthesis. The diarrhœa enfeebles the patient until the blood gravitates in the lungs and produces hypostatic pneumonia, and we observe commencing asphyxia, (hypoxæmia.) We may generalize the disease of this patient, but not typhoid fever. An attentive and judicious localization thus removes the difficulties of practice, thanks to the labours of Morgagni and Bichât, which have conducted us to this result.—*Gazette des Hôpitaux*, No. 142, Vol. xxvi.

CHRONICLE OF MEDICAL SCIENCE.

The translations and abstracts under this head, are made expressly for this Journal.

MATERIA MEDICA, PHARMACY AND MEDICAL CHEMISTRY.

1. *On the Preparations of Iron.* By M. Soubeiran.

It is not sufficient to determine accurately the therapeutical indications of disease; it still remains to fulfil them. Even when the proper medicinal agent is chosen, it is desirable that the practitioner should be acquainted with its different pharmaceutical forms, in order that he may select the one which is best adapted to the objects he desires to obtain. Friend has justly said: *Medicina vero, nihil aliud est quám medicamenti et morbi comparatio.*

In an abstract of the commencement of M. Soubeiran's course on pharmacology, published in the *Bulletin de Thérapeutique*, (Jan. 15th, 1854,) the newly created professor dwells upon the necessity of discarding the innumerable useless and obsolete formulæ which encumber our dispensatories. He justly observes that the multiplicity of pharmaceutical preparations discourages the practitioner from studying a subject which it is indispensable that he should master. He illustrates these remarks by the series of preparations of iron, "which is by no means the most encumbered or confused."

We here find the different preparations of iron, as bases, metallic iron, iron filings, and iron reduced by hydrogen, the black oxide, the magnetic oxide, the red oxide with its varieties of colcothar, hematite, martial saffran, and the hydrated oxide; the sulphuret of iron; the sub-carbonate and carbonate and saccharine carbonate; the chloride, bromide, iodide, cyanide and ferrocyanide of iron; the sulphate and persulphate; the nitrate, the phosphate and pyrophosphate, the arseniate, the acetate, the citrate, the tartrate, the valerianate, the lactate, the mallate, the tannate of iron, all these salts with the protoxide or peroxide of iron as a base, without counting the double combinations, the ammonio-chloride, the potassio-tartrate, the ammonio-citrate of iron, etc., etc. Let us add that these numerous compounds are furnished in every form which has been invented to facilitate the administration of medicines, in powders, pills, wines, tinctures, vinegars, syrups, electuaries, etc., and it will not be considered strange that, in the midst of this false opulence, the practitioner is often embarrassed in making a selection; more especially as each of these preparations are recommended by reliable men, for the fact is that when iron is useful, we always succeed, to a greater or less extent, with any of its preparations.

Let us attempt however to throw some light on this subject. We find in the first place certain compounds endowed with such cohesiveness that we have some difficulty in decomposing them in our laboratories with strong acids and alkalies; such are the arseniate of iron, colcothar, hematite, ethiops martial, and martial saffran. Little is to be expected from these. They may as well be expunged from the materia medica. The advantage of acting slowly is attributed to them; but it must be admitted that they are unreliable. They may be replaced advantageously by more soluble compounds, the dose of which may be diminished at pleasure.

Iron filings, and particularly iron reduced by hydrogen, notwithstanding its insolubility, may be used with benefit. The state of minute division of the second of these medicines ensures its solution by the acids of the stomach; the unpleasant eructation of hydrogen which it occasions is its only disadvantage.

The carbonate of the protoxide of iron (Vallet's Mass) has the same claims to the confidence of the practitioner, provided it is properly enveloped and preserved from suroxygenation. It may be advantageously substituted for the old carbonate, the composition of which is not uniform. It may also take the place of all the salts of the protoxide of iron.

As to the long series of soluble salts, with the exception of slight peculiarities which some of them possess, they all have the same recommendation. The nitrate should be rejected, for its composition is essentially changeable, and it is never found of uniform strength. As a general rule, the soluble salts with mineral acids should not be employed internally, for their atramentous savour and great stypticity affects the gastric mucous membrane unfavourably unless they are very largely diluted, as in certain mineral waters. One of these salts, the sulphate, answers every purpose to which any of them are applicable.

The combinations of iron with the vegetable acids are not so disagreeably styptic. Lastly, some salts have a special action partaking both of their base and of their electro-negative action; such are the iodide and bromide of iron, and also the tannate, the therapeutical value of which, however, is very equivocal.

It remains to determine whether the salts of the protoxide or those of the peroxide are of the greatest practical advantage. Some of the per-salts recommend themselves by their almost absolute insipidness, and by their solubility, which is maintained even in the presence of the albumino-alkaline fluids which constitute our humours. The tartrate of iron and potash is of this number; its composition also is uniform; these two circumstances make it preferable to all the analogous but unreliable preparations which the old formularies have bequeathed to us.

Experience has not decided whether the compounds of the peroxide or of the protoxide should be preferred, and therefore there have been many theoretical solutions of this question. M. Mialhe recommends the per-salts, because, says he, they present iron to the blood at the same degree of oxidation at which it is contained in that fluid, an assertion which is doubted by many. M. Calloud declares, on the other hand, that the proto-salts are the most beneficial, because, according to him, their action consists in a disoxygenation which is the real condition of success. Fortunately, chlorosis is cured, in spite of one or the other theory, whether treated by salts of the protoxide, or by compounds of a higher degree of oxygenation.

What we have said proves that the numerous preparations of iron that figure in the materia medica may be reduced to a small number. A reform of this sort would be still more extensive, should we examine into the utility of the forms under which each compound is administered. Is the preparation insoluble, then the form powder answers every purpose; it is easily administered and preserves the preparation unchanged. For the soluble compounds, every preparation should be rejected which requires that the medicine should be retained in the mouth, in order that the teeth and gums shall not be injured, and that the patient may not be annoyed by an austere atramentary savour. Ferruginous lozenges, and even syrups and electuaries, should be avoided on this account. One pharmaceutical form is always acceptable: the pilular form. An excipient, however, must be selected which will ensure the solution of the ferruginous principle, and the patient should take some liquid after his pill.

From this one illustration, it will be perceived how greatly the materia medica would be improved by a critical examination which would clear away the crowd of remedies which encumber or are prejudicial to it; either because they are unnecessary, or inferior, or altogether defective. Reform should not be carried too far however. The physician would often be embarrassed if only one substance of each type was retained in the materia medica. He must reserve the means of substituting one medicine for another, either to satisfy some exigency of idiosyncrasy, or to humour a patient who is fatigued by the long employment of some remedy, or to gain time by a pretended change in treatment while awaiting the salutary efforts of nature. The actions of medicines, moreover, is quickly exhausted. We must replace the agent to which our organs have become habituated by a new one. It is thus, M. Magendie says, that we prolong the effects of morphia, by substituting for each other the salts with different acids which all have this alkaloid as a base.

2. *On the Preparations of Squill.* By Dr. Chateau.

In 1852, the Faculty of Medicine of Paris proposed the following subject of enquiry: To determine by clinical observation what are the effects of the preparations of squill. The memoir of Dr. Chateau on this subject, based on an extensive series of physiological and clinical experiments, was rewarded with a gold medal. In the *Archives générales de médecine*, for January 1854, we find a résumé of this paper, from which we shall make some extracts.

In his experiments, Dr. Chateau employed chiefly the powder of squill, to avoid the confusion which would be caused by the effects of the alcohol and other agents which serve as vehicles or adjuvants to the other preparations of this remedy. MM. Duméril and Demarquay have demonstrated, in fact, that alcohol is an hyposthenizant, and that it lowers the animal temperature instead of elevating it, as has hitherto been supposed. The administration of an agent of this sort in combination with the remedy to be tested, would of course complicate the experiment.

The results of Dr. Chateau's numerous experiments on dogs were very similar to those obtained by Orfila. The dose of powdered squill was varied from two ounces and a half to twenty grains, either introduced into the stomach or beneath the skin. In whichever way absorption was produced, death occurred in from one to fifteen hours, after rapid convulsions and plaintive cries.

Dr. Chateau details at great length seven of these diabolical performances, all of which were perpetrated on a Sunday. The symptoms were very similar in every case: "The animals became pensive; then nausea and attempts to vomit were observed, liquid dejections were evacuated drop by drop; then tremors occurred, and paralysis of the hind legs, extending after a time to the anterior extremities. The animals then seemed to collect themselves, then, suddenly, convulsions came on, followed immediately by resolution; the subjects would then fall on one side, a few movements of deglutition would follow, then opisthotonos and death. If the dose was small, the phenomena were protracted, but they always succeeded each other in the same order.

In every case the temperature continued to fall throughout the whole duration of the experiment; this phenomenon depended, incontestably, upon the depressing effect of the squill."

"Post-mortem examination explained clearly the immediate causes of these phenomena. The stomach and intestines were healthy or slightly phlogosed; the viscera presented a sanguineous stasis; the bladder was either empty or contained a very small quantity of urine; the ganglia of the sympathetic were red; the cerebrum presented no alterations, but the cerebellum and spinal cord were so much softened as, in some cases, to be almost diffluent."

Dr. Chateau concludes from these data that squill exerts a depressing effect upon the cerebro-spinal and ganglionic nervous systems, acting primarily upon the ganglia and secondarily upon the spinal marrow.

These facts, however, give rise to no very broad therapeutical deductions, and the author accordingly resorted to clinical experiment for materials to complete his essay. He administered squill in cases of asthma, emphysema, pleurisy, dropsy, rheumatism, etc., in every disease in fact in which diuresis seemed requisite or alvine secretion necessary.

In four cases of emphysema, the squill, in doses of four grains daily, of the powder, gradually increased to ten grains, produced in two a profuse diuresis, and, at the same time, a laxative effect, and in the other two, in the form of oxymel, it facilitated expectoration and caused some hypersecretion in the kidney.

In three patients with albuminuria, the effect of squill was either laxative or diuretic, these two effects being complementary to each other; for, as M. Trousseau declares, when a diuretic purges it no longer promotes the urinary secretion. The albumen disappeared from the urine in none of these cases.

Three patients with abdominal dropsy were treated: The first had cancer of the pylorus; in this case, the wine of squill produced a diarrhœa, which continued until death. At the autopsy, squill was found in the stomach, although its use had been suspended for *one month.* In this case the urine became scanty and was ultimately suppressed. The second case was cured in two months by the alternate diuretic and laxative effect of squill. It was a case of simple ascites. The third patient was a woman with cysts of the ovary. The administration of squill produced diureses, but did not diminish the serous collection.

The effects of squill were carefully noted in cases of phthisis, pneumonia and pleurisy. Altogether 17 patients were observed. The effects of squill in these cases may be summed up by saying that:

7 times it had a *diuretic* and *purgative* action.
Twice it had a *diuretic* action.
Twice it had a *purgative* action alone.
4 times it had an *expectorant* action.
In one case an *expectorant* and *diuretic* action.
In one case no action at all.

The action of squill in disease coincides with the results of experiments on animals. In these, it was found that squill had a hyposthenic action on the ganglionic nervous system. The ganglionic system of the grand sympathetic presides over organic life, and is the motor power of the secretions of the economy. The ganglia were found inflamed, and it was natural therefore that the secretions should be exaggerated.

In conclusion, Dr. Chateau declares that the preparations of squill are very similar in their effects; the powder is the best form, then the wine; the oxymel, however, is preferable for promoting expectoration. The tincture is useful externally; when combined with digitalis, it makes an excellent diuretic, according to Trousseau.

Small doses are preferable. Two or three grains are usually sufficient for a dose, and we should never go beyond seven or eight grains. One scruple will kill a large dog, and, according to Quarin, four drachms have caused death in the human subject.

3. *On the Febrifuge Properties of the Olive.*

In the year 1811, M. Cazals, of Agde, noticed the good effects produced by the administration of olive leaves (*Olea Europæa*) in intermittent fever, and a chemical examination of them was attempted by M. Ferrat. (Vide *Bulletin de Pharmacie*, tome iii., p. 83, et 433.) Favourable results also attended similar trials made in France by Dr. Bidot, and in Spain by Drs. Beguin and Faure.

In 1828 Dr. E. Pallas published a more elaborate investigation of the subject. (Vide *Journal Universel des Sciences Médicales*, tome xlix., p. 257.) He states that olive leaves were employed by the physicians of Spain as a febrifuge, and that during the war in that country, from 1808 to 1813, the French *Officiers de Santé*, frequently prescribed them as a substitute for cinchona bark. Dr. Pallas observed marked beneficial results from the use of the *bark* of the olive in the form of an alcoholic extract. Dr. Pallas analysed the leaves as well as the young bark, and found them to contain, among other less important constituents, a crystallizable substance, which he named *Vauquiline*, and a bitter principle, to which latter he ascribed most of the febrifuge properties of the plant. As the young bark contains more of these matters than either the leaves or the old bark, he concluded that it is more to be preferred as a medicinal agent.

Vauquiline, according to this author, is a colourless, inodorous solid, having a slightly sweet taste. It crystallizes in micaceous plates or in stellate prismatic crystals, which are very soluble in water, and in boiling alcohol, from which it is precipitated as the liquor cools. Young olive bark affords about two per cent. of *Vauquiline*. This substance seems to be identical with *Olivine*, mentioned by Landerer, (Turner's Chemistry, 7th ed., 1842, p. 1125;) the latter name is objectional, however, because it has already been applied to two other bodies, namely, to the olive green substance obtained by the action of sulphuric acid on salicine, and to a variety of the mineral chysolite.

Of the pharmaceutical preparations of olive bark, the more useful appear to be the tincture and alcoholic extracts. The tincture is made by digesting one part of the young bark in eight parts of spirits of wine of *sp. gr.*, 867. It may be administered as tinct. cinchonæ. The dose of the extract is half a drachm in water.

The varied and independent testimonies in favour of the febrifuge properties of the olive seem to render it deserving of a more extended investigation, both medicinally and chemically. That some therapeutic value does attach to this plant, is rendered more probable by the fact that both the lilac (*syringa vulgaris*) and the ash (*Fraxinus excelsior*), plants of the same natural order, possess febrifuge powers, and are used on that account in some parts of the continent.—*Condensed from Pharmaceutical Journal.*

4. *On the Proximate Principles and Nutritive effects of Bran.* By M. CHEVREUL.

[In the *Compte Rendu* of the French Institute for the meeting of Nov. 21st, 1853, we find the following report on a memoir by M. Mouriès, in which that physician gave the result of his investigations into the properties of bran.]

Bran contains starch, azotized matter, and a coloured pellicle, which has been considered as a ligneous structure. Flour from which the bran has not been separated, forms a bread which physicians prescribe in cases of habitual constipation and cerebral congestion. According to Magendie, dogs can live on bran-bread, while they die if fed on white bread alone.

Why is there this difference in the two aliments? What is the nutritive power of bran?

It does not reside alone in the nitrogen of its proximate principles; for bran contains a relatively small proportion of azotized matter. M. Mouriès has discovered that the internal surface of bran is coated with several proximate principles, which are yet to be isolated and classified. These principles are soluble in warm water, and possess, like diastase, the remarkable property of liquifying starch and transforming it into sugar and dextrine; it is by intervening as a ferment, then, that bran acts in panification, and, consequently, in digestion.

If a quantity of starch made into paste and heated to 40° or 45° centigrade, be divided into two halves, and a certain quantity of warm bran water is added to one half, and an equal quantity of distilled water is added to the other half, the first portion will liquify in a great measure, while the second will remain unchanged. Iodine water will colour the first blue, and the second purple.

One hundred grammes of starch mixed with 1500 parts of water, with 100 grammes of warm water in which 20 grammes of bran have been infused, are liquified in twenty minutes at a temperature of 40° cent. After two hours, the solid residue is 15 grammes, and the water being evaporated leaves 85 grammes of sugar and dextrine.

The active principle of bran water differs from the active principle of barley or diastase, inasmuch as its power is destroyed by precipitation with alcohol, which is not the case with diastase, or by a temperature of 75° cent., while diastase requires a temperature of 100° for its destruction.

The effect of the principles of bran upon white flour commences in the preparation of the dough, continues during the first part of the baking, and finishes in the stomach.

The experiments of M. Mouriès explain, therefore, the difference between bran bread and white bread, by the influence on the starch of the bran, which is contained in the one and absent in the other.

5. *On the Purgative Properties of Rhamnus Frangula.* By Dr. Ossieur, of Roulers.

> Ne pigeat ex plebeis suscitari si quid
> ad curationem utile.—Hippoc.

The juice of the fruit of *Rhamnus catharticus*, or buckthorn, is officinal in the London pharmacopœia, and enters into some of the formulæ for black draught; the plant itself is found, though rarely, in Massachusetts and New York. Rhamnus frangula is not found in this country; it is indigenous in Germany. It is a large shrub, growing in moist localities; its bark has long been employed among the peasants, for its therapeutical virtues have been traditional since the time of Mathioles, the learned commentator of Dioscorides, who adduces various testimonials of its efficacy.

In the *Moniteur des Hôpitaux*, Jan. 18th, 1854, we find an article in which a high rank is claimed for this species of rhamnus. In fact, Dr. Ossieur pronounces it the best simple evacuant of the intestinal canal which is known. It produces soft dejections, unaccompanied by pain, or increase of the biliary, pancreatic, or intestinal secretions. It produces no mucous irritation or consecutive intestinal relaxation; it never acts with violence, no matter in what dose it is administered; it does not derange the digestive functions, and has the great advantage of not leaving constipation behind it.

The peasants employ it in tonsillitis and gout. Dr. Ossieur considers it inferior to calomel in the first of these affections, and of no specific virtue in the second; but he regards it as the most eligible remedy we possess, in cases of habitual constipation.

The dose is an half ounce to an ounce of the dried bark infused in six ounces of warm water. The bark can be obtained from Belgium at a merely nominal cost.

6. *Getah Lahæ; a new Pharmaceutical Substance.*

A Belgian pharmaceutist, Van Hengel, has lately called attention to a solid resinous substance, the product of an East Indian tree, the *lahæ*, which possesses remarkable adhesive properties.

This resin is of a dirty grey colour; it melts in boiling water, and is readily spread as a plaster. It furnishes good adhesive strips for the treatment of indolent ulcers on the plan of Baynton. It seems to have some analogy with yellow wax, and is a good substitute for that substance in the preparation of cerates. It costs only a florin (40 cents) the kilogramme, (two pounds.)—*Jour. des Connaissances Méd. Chir.*, Feb. 1854.

7. *On Insufficient Alimentation, and the Value of Phosphate of Lime in Nutrition.*

In the *Bulletin de l'Académie Impériale de Médecine*, for January, 1854, we find a report by M. Bouchardat, on the researches of a young and learned chemist, M. Mouriès, in regard to the effects of phosphate of lime in the nutrition of animals, and the influence which the judicious employment of this salt is capable of exercising upon the mortality of children in large cities.

It has been a comparatively short period since physiologists began to appreciate properly the importance of inorganic principles in the phenomena of life. The farther we penetrate into this complex problem, the greater is the importance attributed to bodies, the presence of which in the human organism was regarded as quite accidental.

Very dissimilar organic compounds may be substituted for each other in our diet without any disorder in the general harmony, but the inorganic principles can only be replaced by substances very closely analogous to them. Albumen, fibrin, and casein, and other more complex aliments, though differing in origin and composition, may fulfil the same physiological end, but it is different with inorganic principles. Lecanu has shown that iron is indispensable for thep roper constitution of blood-globules; chloride of sodium is of primary importance also as a constituent of the liquor sanguinis, and it is only as an exception that we find, in certain gramnivora, this salt partially replaced by the phosphate of soda or of potash. Liebig has shown that the chloride of potassium of the muscles cannot be replaced by chloride of sodium. Each inorganic constituent of the organism has, therefore, its definite and limited sphere of action, to which it is exclusively adapted.

Among the indispensable inorganic salts, the phosphate of lime holds an important rank. M. Mouriès has devoted himself to the elucidation of its peculiar action. He deduces from his experiments the following conclusions:

1. Phosphate of lime plays a more important part in nutrition than has heretofore been believed. Independently of its necessity as a constituent of bone, this salt maintains that irritability without which there is no assimilation, and consequently no nutrition. Its insufficiency, therefore, produces death with all the symptoms of inanition, while its insufficiency in a less degree, produces a series of lymphatic diseases.

2. The food consumed in cities is deficient in this respect. Nurses' milk has, consequently, the same defect. The infant as well as the fœtus suffers from the deprivation of this element so indispensable to its development and life. Hence one of the causes of the increase in the number of still-born children, and of the mortality of infancy.

3. The addition of this salt, in combination with animal matter, to alimentary substances, obviates one cause of disease and death.

The following are the principal facts on which M. Mouriès relies to establish these conclusions:

The blood of animals contains a constant proportion of earthy phosphates, which is independent of their ingesta. The pigeon ingests phosphate of lime slightly in excess, in the grain and calcarious gravels which it picks up; the horse swallows an excess, in its fodder; the dog procures a still greater excess from the bones on which he is fed; and yet the blood of the pigeon contains in 1000 grammes 1.20 of phosphate of lime; the horse 0.5; the dog 0.4. This result is not accidental; all birds whose blood has been analyzed have 1.5 to 1.2 of phosphate of lime, while the proportion in the blood of the carnivora and herbivora varies from 0.9 to 0.4. The proportion thus regulated by nature, is modified by age and sex. The bull, cow, and calf have the same food, yet their blood contains respectively 0.5, 0.9, 0.8 of phosphate of lime.

The requisite proportion of alkaline phosphates varies, therefore, in different animals. A pigeon weighing one pound died at the end of ten months, during which period he was fed daily on one ounce of wheat, with common water for a drink, by which rather more than a grain of phosphate of lime was ingested daily: on the other hand, a woman weighing 100 pounds enjoyed perfect health upon a diet which furnished her daily with 90 grains of phosphate of lime. Thus health in the one case, and death, in the other, with relatively equal quantities of this salt.

We shall recur to this example to show how complex are the conditions of these experiments, and what reserve is necessary in drawing conclusions from them.

M. Mouriès asserts, and the fact has already been noted by Chossat, that if the proportion of alkaline phosphates of the food is deficient, there ensues atony of the digestive organs, imperfect assimilation, and death. To prove that pigeons die from want of phosphate of lime, we may observe that their death is hastened if they are allowed only distilled water, while their lives may be preserved by adding earthy phosphates to their food.

M. Bouchardat observed that the grain on which MM. Mouriès and Chossat fed their pigeons contained only traces of common salt. The birds therefore should be expected to suffer from the deprivation of this principle. M. Bouchardat accordingly made this experiment; he confined two pigeons, and fed them on dried grain. In two months the health of the female became impaired; she suffered from thirst and diarrhœa and laid no more eggs. She was set at liberty. She flew immediately to a window-sill impregnated with alkaline chlorides, and began to peck eagerly; there was a larger quantity of salts on the interier of the window-frame; the pigeon entered through the open window, and permitted herself to be re-captured, so imperious was her demand for these principles. Her health was re-established; in three days she laid another egg. It is wrong, therefore, to conclude with

M. Mouriès that a deficiency of phosphates is the only cause of the symptoms he observed; in this case, the absence of chlorides was the obvious cause.

M. Mourèis has established, by interesting calculations, that grain furnishes a sufficient supply of phosphate of lime for the reparation of bone, but not for other essential functions of the economy. From the curious fact that there is a constant proportion between the temperature of animals, and the amount of phosphate of lime contained in their blood, he deduces the principle that this salt keeps up animal irritability, without which nutrition is impossible. The following table must interest physiologists:

	Phosphate of Lime.		Temperature.
	Mouriès	Poggiale.	
Blood of the duck,	1.50		42°5 cent.
——— the hen,	1.35	1.25	41°5 "
——— the pigeon,	1.20	1.23	40° "
——— man,	0.80	0.6	37°5 "
——— the horse,	0.40	0.5	36°8 "
——— frogs,	a trace.		9° "

If these results are confirmed, it will appear that the ingestion of phosphate of lime is not only indispensable for the reparation of bone, but that it is connected with the function of calorification.

In the second portion of his memoir, M. Mouriès, starting from the principle demonstrated by Chossat, verified by Boussingault, taught by Bérard, and now admitted by all physiologists, that diet is defective which does not contain enough phosphate of lime to repair the waste which is continually going on in the economy, attempts to prove that the food commonly consumed in cities does not contain the quantity of this salt which is required by nurses and pregnant women.

He commences by calculating the quantity of phosphate of lime which ought to be ingested in the twenty-four hours, which he estimates from analyses of the excreta at 110 grains. He then attempts to show that this quantity is not contained in the food of nurses in cities. The urine of women in the country contains 90 grains of phosphate of lime in the twenty-four hours, while the amount of this salt in the urine of women in cities varies from 20 to 90 grains. M. Mouriès has sought to confirm his hypothesis by direct proofs; he has examined the food consumed in cities and shown that it exhibits a deficiency of one half in alkaline phosphates. He has examined the milk of nurses, and shown that in 18 healthy country women the proportion of earthy phosphates in the milk varied from 1.2 to 2.4 *per cent.*, while in the milk of ten Paris nurses the proportion varied from 0.5 to 0.9, and in seven others there was only a trace of phosphate of lime.

In the third portion of his essay M. Mouriès adduces clinical facts in illustration of the advantage of supplying this deficiency of phosphate of lime in aliments. In 13 cases, in which the proportion of phosphate of lime averaged 0.7, 75 grains of this salt with twice that quantity of albumen was daily administered in soup; in a week the proportion of earthy phosphate in the milk rose to 2.1. In 5 cases pregnant women were subjected to the same treatment; the milk, after delivery, contained 1.9 to 2.1 of phosphate of lime. Only 3 of the 18 children died.

These results, though insufficient to determine such a serious question, are yet very worthy of attention. In the debate to which they gave rise, M. Gibert vehemently condemned the present tendency of chemists to interfere in medical inquiry. The question of lactation was a medical one, he said, and was only to be solved by clinical observation. M. Bouchardat, on the other hand, feared only ignorance, and was not alarmed at the application of chemistry to medicines, especially when its results were as inoffensive as those he had discussed.

OPHTHALMOLOGY.

8. *Mydriasis and Blindness cured by the Expulsion of Intestinal Worms.*

Among the symptoms indicative of the presence of intestinal worms in children, authors mention extreme dilatation and immobility of the pupils. The cases in which these conditions induce complete cecity are so rare, however, that we do not hesitate to reproduce the following observation, which we find in the *Revue Thérapeutique du Midi.*

"A child of seven years, during an attack of indigestion, was seized with convulsions. Dr. Fallot was summoned, and prescribed eight leeches behind the ears, an antispasmodic draught, an enema of assafœtida, and cataplasms on the feet. The next day the child complained of inability to distinguish objects. The head was still congested. The pupils were enormously dilated. Leeches were again applied to the mastoid apophyses. A few days afterwards the child became completely blind. A blister was placed on the nucha.

"Not knowing whether he was treating an incipient amaurosis or a mydriasis symptomatic of gastric or verminous disorder, Dr. Fallot placed before the patient's eye a card with a little aperture made by a pin. This enabled the child to distinguish large objects. The circumference of the cornea was cauterized with the solid nitrate of silver; stimulating frictions and ammoniacal vapours were employed, and calomel and Corsican moss were administered internally. The following day the patient passed twenty-eight lumbricoid worms, and from this date the pupillary dilatation gradually diminished, until, one month after the attack of indigestion, vision was restored to its normal condition."

9. *On the Medical Treatment of Cataract.* By Dr. Garcia Lopez.

The majority of surgeons consider the cure of cataract without an operation a chimera. And yet it is impossible to deny that cataract is sometimes spontaneously cured. Is it then impossible that therapeutics may some day realize what nature occasionally accomplishes by herself? This question is often asked by unprofessional persons. Medical men have uniformly denied the possibility of the cure of complete lenticular cataract by medical treatment, while impudent and shameless charlatans have industriously propagated the opposite opinion among all classes of society. In the clinical reports of Dr. Beauvais* are recorded five *homœopathic* cures of cataract, one of which, treated by Dr. Caspari, was evidently a case of corneal opacity depending on trichiasis. The offending cilia were removed *surgically*, the patient took one drop of *cannabis* daily, and recovered entirely.

In the work of Tavignot the reader will find an account of the experiments of Professor Pugliatti, of Messina, on the curability of capsular or capsulo-lenticular cataracts without an operation. This surgeon supposes that a strong solution of ammonia, applied at the internal orbital angle, penetrates the tissues of the eye, and exerts a curative effect upon the opaque crystalline system. He combines with this treatment the administration of five grains of iodide of potassium daily. He reports several cases which were benefitted, and one or two which were supposed to be cured by this means. In every case the treatment lasted many months. In the majority of cases no amelioration was perceived. In the Spanish journal *El Porvenir Medico*, for December 1853, we find four cases in support of the efficacy of the treatment of Pugliatti, reported by the author, whose name we have placed at the head of this article, Dr. Garcia Lopez:

1. A man of fifty years; nearly complete capsular cataract had existed for three months: vesication with ammonia, without any internal treatment, procured resolution in two months. 2. A man of thirty; soft, striated, lenticular cataract, two years old; capsule healthy. After six weeks of treatment the patient demanded an operation. Dr. Lopez found the lens diffluent and lactescent. 3. A woman of forty; hard, incomplete capsulo-lenticular cataract in both eyes, developed with a year. She could only distinguish very large objects. After seven months of treatment the patient recovered her vision, and could sew and follow her usual avocations; the opacity had disappeared except in a limited central point. 4. A woman of fifty; capsulo-lenticular cataract had existed for three years on the right side; a similar opacity was forming in the left eye, complicated with amblyopia. In six months, after the constant employment of ammoniacal vesication and iodide of potassium, a decided amelioration took place in the left eye; the right was unaffected.

Dr. Lopez reports these cases without any desire to attach undue weight to them, and can hardly be supposed to be prejudiced in behalf of a method which he did not originate.

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* *Annales d'Oculistique*, tom. ii., p. 218.

There is another remedy to which much consequence is attached, to which Dr. Lopez does not allude, we refer to the iodine ointment allowed to dissolve on the conjunctiva. The editor of the Paris *Gazette hebdomadaire*, (Dec. 1853,) reports a case of double capsulo-lenticular cataract cured by this method.

In a succeeding article we have given a full account of the mode of treatment of cataract depending on capsulitis. The reports of the Medico-Chirurgical Society of Richmond, contained in the present number of the Journal, contain the histories of two cases of traumatic cataract, and one of supposed congenital cataract, in which the advantages of a free use of mercury in opacities of the crystalline system connected with inflammatory action are strikingly exemplified.

In all such cases, and in immature cataracts, no harm can arise from instituting medical treatment during a period which would be otherwise lost in awaiting the opportune moment for an operation. It must be confessed, however, that Lebert's researches into the structure of cataract demonstrate that in the great majority of cases medical treatment must be unavailing. Rognetta was of the opinion that an absolute denial of the efficacy of remedies in cataract was unwise; we concur in this sentiment, and trust that farther researches will be made in this interesting and obscure subject.

10. *Phosphenes or Luminous Rings of the Retina.* By M. SERRE, of Alais.

The term *phosphene* (φως, light. and φαίνω, I cause to appear) is not altogether new. A member of the French Institute, M. Savigny, who recently died, after living for a quarter of a century in a dark room on account of a terrible neurosis of the organs of vision, described in 1838, under this name, phenomena analogous to those the nature and mechanism of which Dr. Serre has since carefully investigated. The phenomenon itself had been noticed and referred more or less imperfectly to physiological causes by numerous observers, among whom we may mention deferentially the great name of Newton.

Notices of Dr. Serre's researches have appeared in this country,* Müller and Brewster have written on the same subject, and therefore none of our readers can fail to know what phosphenes are. We have therefore simply to remind them that a pressure on the eye-ball behind the line of juncture of the cornea and sclerotic produces two simultaneous luminous sensations; one, bright and large, on a point opposite to that at which pressure is made (*grand phosphêne*), the other a feeble gleam, just in front of the point compressed (*petit phosphêne*). This annular luminous appearance, then constitutes phosphene, a phenomenon to which Dr. Serre attributes great importance in connection with the diagnosis of amaurosis.

The luminous ring is sometimes circular, sometimes elliptical, sometimes broken and irregular. It always presents a lacuna, which is invariably directed backward. If the pressure be made abruptly and removed the impression lasts one or two seconds; if the pressure is continued the annular image is gradually effaced. The image is more distinct the more complete the darkness in which the experiment is made, but it is produced in the light as well as in the dark, whether the eyes be open or closed.

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*Am. Jour. of Med. Sciences, Vol. xxvi, p. 250. etc.

Sir David Brewster explains this phenomenon by supposing that the retina undergoes compression in two points, around which rings of liquid are formed, and Dr. Serre accepts this solution of the problem. Pressure on the cornea does not produce phosphene, for it ends in the *punctum cœcum.*

M. Serre has recently embodied his various essays on this subject in an interesting volume.* We shall pass over the physiological portion of this treatise, as attractive as it is. We hardly dare to repeat with Dr. Serre the assertion he has taken as an epigraph: "It is in closing our eyes to the exterior light, that we discover the laws of vision." We cannot grant this superiority to the blind, whose ideas on the physiology of the eye and the laws of light are usually the reverse of lucid.

The pathological part of the book is the practical and really essential part. Until Helmholz appeared, it was generally admitted that the retina was inaccessible to direct exploration; Dr. Serre provides us with an easy method of examining this membrane, of interrogating it; according to his views the absence or presence, the integrity or alteration of phosphenes, offer a precious means of diagnosis in anæsthetic states of the retina.

The examination should be made in a dark room; the patient's eyes being closed, three or four light abrupt blows are impressed on the anterior portion of the sclerotic by the pulp of the half-flexed index finger. The patient is requested to direct his attention to the point at which the luminous ring should appear.

M. Serre thus describes the semeiological value of phosphene in amaurosis:

> "The constant, invariable and pathognomonic characteristic of amaurosis is found by interrogating the luminous ring, which is produced by the slightest compression of the healthy eye, without pain or any uneasy sensation and on all parts of the eye-ball except the cornea; which is still produced, though altered, when the retina is slightly diseased, and which can never be formed when the retina is completely paralyzed.
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> "Since the period at which I commenced my researches on phosphene, I have not met with a single amaurotic patient who could perceive the luminous ring upon compression of the eye-ball. [M. Serre reports 48 cases of amaurosis.]
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> "The absence of phosphene in complete amaurosis is, then, a constant fact, and such facts are rare in a science like our own. This one is the pathognomonic symptom of amaurosis; it reveals it invariably, whatever its cause. Whether the paralysis is optic, cerebral, spinal, ganglionic, erythisic, organic, torpid, congestive, whether the pupil is contracted or dilated, obliterated, motionless or responsive to light; whether there is a dim perception of light or not; whether, lastly, the vitreous humour, the crystalline

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Essai sur les Phosphénes, oct. pp. xx—469. Paris, Masson, 1853.

system, the capsule, or the cornea have become completely opaque or not; in spite of these complications and obstacles the negative test of phosphene preserves its absolute, entire value, to which every one may add at all times by verifying, as we have done on thousands of individuals, the constant and invariable perception of phosphene in all those persons in whom the retina preserves its integrity of function."

This is a thinking man, whose scientific antecedents should inspire all confidence, who holds this formal and positive language. We do not know what the great opthalmologists think of it, and have been astonished at the silence with which this discovery has been received, constituting as it does, if it be true, as great a progress in diseases of the retina as auscultation in diseases of the chest. The surgeons connected with the press in this country are waiting for the dicta of their trans-atlantic brethren; the magnates of Paris are in no haste to examine the researches of a country physician. Amédée Latour alone, appears to have taken some interest in the subject. He has chronicled one case confirming the law promulgated by M. Serre. It refers to a lady whose vision was becoming weaker day by day, in whose eyes phosphenes became less and less distinct and ultimately imperceptible.

The absence of phosphene may precede the loss of sight. M. Serre cites a remarkable case in which it was impossible to produce the luminous rings, in which blindness supervened in twenty-four hours. Thus phosphene becomes a means of prognosis as well as of diagnosis.

We commend the work of M. Serre to our readers. They will find it a most attractive book; it presents a subject which offers an inexhaustible field for innocent and simple experiments; every practitioner can verify in his own person, or on his patients, the indications boldly set forth by the author, and will be assisted in his researches on these curious phenomena, by the illustrations which are intercalated in the text of this original treatise.

11. *Cretaceous Degeneration of the Crystalline Lens, producing Sympathetic Morbid Changes in the Sound Eye.* By H. Haynes Walton.

All surgeons who are engaged in practice, have noticed that a blindness of one eye frequently induces impairment of the functions of the other. Mr. Walton suggests that an operation on the diseased eye by which we remove the cause of irritation, and thus check the distressing sympathetic effect on the sound organ, would be beneficial, and reports three cases:

Case I.—The patient had lost his right eye in infancy. The left eye was sympathising. Intolerance of light and lachrymation; vision very imperfect; he could not read print of large size. The order of symptoms was: pain, impaired vision, inflammation, and the first symptom only showed itself twelve months previously. Mr. Walton operated on the blind eye, incised the cornea and extracted the chalky capsule and the lens with a pair of forceps. The wound healed kindly, and the other eye was at once greatly relieved, and would have gai fectly recovered, but that adhesions of the iris to the capsule existed, which rendered the pupil irregular. Cases 2 and 3 were both similarly treated, and with the most favourable results. In the third case the right eye was lost in childhood from purulent opthalmia. The left eye was becoming involved; continual pain, intolerance of light and defective vision had rapidly supervened. Mr. Walton extracted the crystalline lens in a state of cretaceous degeneration. Upon removing this cause of irritation the other eye at once recovered its power, and vision was perfectly restored.—*Condensed from Medical Times and Gazette.*

12. *On Inflammation of the Capsule of the Crystalline Lens.* By Dr. J. J. Jenni.

Although it is many years since Walther (1810) and Benedict (1814) called the attention of the profession to diseases of the crystalline system, and especially to inflammation of the capsule (*capsulitis, capsitis*) as a separate disease and a frequent cause of cataract, our knowledge of this inflammation has not advanced as rapidly as our knowledge of the pathological processes of some other parts of the eye. This depends, no doubt, upon the obscurity of this disease at its outset, and upon the fact that surgeons are rarely consulted in regard to it until it has already produced an opacity of the capsule.

German opthalmological works treat of capsulitis in a very superficial manner; the French authors generally mention it incidentally in speaking of cataract. Nevertheless I dare to assert, however strange it may appear, that, except in those cataracts dependent upon advanced age or defective nutrition, opacity of the crystalline system is always the result of inflammation of the capsule or of the lens itself. We should presume that this was the case from analogy alone, since the most diverse remote or proximate causes—a traumatic lesion of the eye or its appendages, the long continued action of strong light, metastases, rheumatism, syphilis, scrofula, etc.—frequently induce inflammations of different portions of the eye. In my own experience, the purulent ophthalmia of new-born children has often caused cataract, and many a so-called congenital cataract has been produced after birth by this disease. We know, too, that it is common to meet with cataract after internal inflammations of long duration. All the transparent portions of the eye (cornea, membrane of the aqueous humour, hyaloid membrane, etc.,) become turbid unless their inflammations are quickly subdued, and we cannot conceive of an opacity of these tissues without antecedent inflammation. Capulitis also, when neglected, is always followed by opacity of the capsule, (capsular cataract,) and subsequently of the lens, (lenticular cataract.) Milky cataract may perhaps be regarded as a lentitis which has terminated in suppuration; we know that true purulent cataracts have been observed. May we not also consider the hard cataracts of old people, whose organs are all exposed to induration, as a termination of inflammation of the crystalline capsule. Caseous or viscous cataracts are very analogous to the softening consequent upon inflammation. Finally, I would compare siliquose cataract with sphacelus or necrosis, as another mode of termination of inflammation. If these suspicions are correct, will it not be better to speak of suppuration, induration, or softening of the crystalline system, rather than to repeat incessantly a term as indefinite as it is senseless; cataract?

The adhesions observed between the different portions of the crystalline system, or between the anterior capsule and the uvea, even when there has been no traumatic lesion, are another proof that cataract has been preceded by a state of phlogosis. The symptoms which attend the commencement of the formation of a cataract, such as increased sensibility to light, *muscæ*, etc., are at least indications of a state of irritation in the visual apparatus.

It will not do to attribute cataract to a simple alteration of vegetation in the crystalline system. If we understand by this, insufficient nutrition of the lens, we must admit that every lenticular cataract commences as simply capsular, since the capsule nourishes the lens by its secretion,[*] the Morgagnian fluid. No vessels have been demonstrated, so far as I know, in the lens itself.

Before passing to the description of capsulitis, I should remark that what I have to say does not coincide entirely with the brief descriptions of this affection to be found in manuals on the eye. During ten years of ophthalmological practice, I have observed 28 cases of inflammation limited to the capsule, and many other instances of capsulitis consequent upon iritis, inflammation of the membrane of the aqueous humour, or other inflammations the primary seat of which could not be determined. In all the descriptions of capsulitis that I have read, a whitish opacity behind the pupil is mentioned as the principal pathognomonic sign of this affection. According to Jungken, it is characterized by a pearly, lustrous opacity. My experience teaches me that this is a *product* of inflammation. It is much more important to discover, if possible, the pathognomonic signs which precede this state.

We shall study two distinct periods of this affection: that of the formation of vessels, and that of exudation or of opacity.

First Period.—Capsulitis commences insensibly, and often makes such slow progress for several weeks, that the most attentive patient scarcely suspects it. At last he remarks, especially if he has ever before lost the use of his eye, that he sees less clearly than usual in a bright light, while his vision continues good in cloudy weather or at dusk. If the surgeon is now summoned, he will not be able to detect anything abnormal, even with the aid of a magnifying glass; and, as this condition may continue for weeks or months, the patient often forgets his disease altogether.

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[*] What is the nature of the crystalline body? Is it the product of a secretion? Is it solid? M. Dugés has recently brought new facts, and the weight of his authority, to the support of Dr. Young's opinion, which not only admits that the lens is a living active organ, provided with vessels and nerves, but even a muscular, contractile organ, susceptible of augmenting or diminishing its density and curvature, and enabling the eye to accommodate itself to distances. The lamillated structure of the lens certainly presents a linear arrangement; but there is nothing resembling muscular fibre in it. I believe that I am correct in the opinion that *the lens is the product of the solidified secretion of the capsule.*—CRUVEILHIER. *Anatomie.* T. iv., p. 114. *Note by the Translator.*

If the patient is watchful, he is gradually convinced that his vision is impaired in bright weather, and especially by candle-light. The images of small objects become confused when the patient looks at them for any length of time; this phenomenon disappears if the eyes are rested by fixing them on some remote object, but it returns when the patient attempts to read or write; it increases from week to week, and soon a haze or mist appears to invest every object at which the patient looks. In one of the cases observed by the author, the individual whose eye was affected said that it seemed as if he always had on spectacles covered with dust. Even when the disease is developed to this point, it is impossible for the surgeon to detect any physical alteration, and the patient only complains of impairment of vision, and experiences none of those symptoms of congestion, which are so common in many ophthalmic diseases, especially in congestive amblyopia.

In proportion as the haziness of vision increases, a little photophobia and a pale redness around the cornea are usually developed. In some patients there is a dull pain in the supra-orbital region, and an increased secretion of tears, while in others these symptoms are wanting throughout the whole course of the disease. The normal contractility and dilatability of the pupil contrasts strikingly with the progressive diminution of vision. If at the period at which the reddish circle about the cornea (which is a constant symptom) appears, the eye is examined with a good lens, the pupil being dilated by belladonna, there may be seen in the posterior chamber, near the pupillary margin of the iris, minute dusky red points, forming a circle concentric with the pupil, and, behind this zone, the naked eye can perceive a discolouration, of a blackish grey, which gives the eye a dull, fatigued expression.

Gradually the reddish brown points become visible to the unassisted eye, without dilating the pupil, and if belladonna is employed, the points are found to remain stationary, and not to adhere to the pupillary margin, as without this test they might be supposed to do; in this way we are prevented from confounding this affection with uveitis. These brown points are nothing less than agglomerations of blood vessels, from whence, in the course of the disease, innumerable little vessels arise, and run towards the centre of the capsule, forming a vascular network, which gives rise to the dull appearance in the posterior chamber. The greater the development of this net work, the greater is the interference with vision; I have known cases in which vision was as much impaired as in the advanced stages of cataract although no alteration of the eye was perceptible except upon close inspection. The brown colour gradually changes to a deep grey, as the second period, or that of stasis and exsudation supervenes. The vascular arches concentric with the pupil become of a yellowish green. The centre of the capsule is not covered with agglomerations of vessels; the network disappears as the grey opacity increases: the pupil contracts less readily, but the other symptoms continue.

At this stage of its development, the disease, if left to itself, may pause, having produced a capsular cataract, which is a rare termination, or the lens may become involved, a capsulo-lenticular cataract resulting, or iritis may supervene, or choroiditis, or a general inflammation of the internal tunics, hyaloid membrane, etc.

The progress of capsulitis is slow, but we cannot speak with precision on this point. I have seen patients who for six months had seen as through a gauze, and were still in the first stage of capsulitis; others have noticed that their vision was impaired within a few weeks only, when already a grey opacity could be distinguished behind the pupil. Three years may elapse before capsulitis produces total blindness. It rarely attacks both eyes at once, but commonly appears in the second eye when the first is destroyed.

It is said that primary capsulitis is rare; I believe that it is more common than is imagined, although the capsule generally becomes inflamed after inflammation of the membrane of the aqueous humour or of the uvea. Whether the phlogosis commences in the anterior or posterior chamber, the results are the same, and the inflammations of these parts may be classed under the common name of *inflammatio serosa oculi*. The condition described by Dr. Heidenreich, of Anspach, of a *peculiar metamorphosis of the internal structures* of the eye is probably analogous to these diseases.

The causes of capsulitis are obscure. It commonly occurs in elderly persons, especially in those who fatigue the eyes by regarding minute objects. In four cases, I believed that the gouty diathesis had its influence; six of my patients were wood engravers; in one case, the cause was a blow on the eye. I have never discovered any etiological connection between this disease and scrofula or syphilis, or rheumatism, as Jungken pretends to have done. This idea of rheumatic metastasis is too much employed in opthalmology as a cloak for ignorance. In one of my patients, a school-master aged 45, capsulitis supervened on the suppression of hemorrhoids, and resisted all remedies until the hemorrhoids returned, when an amelioration occurred, which was followed up and converted into a cure by doses of corrosive sublimate, and counter-irritants.

The oldest of my patients was 66; the youngest 21; 19 were males, and 9 females; in the majority the iris was light, which I considered an accidental circumstance. In 7 cases, only one eye was affected; in 21, one eye was already gone and the disease had commenced in the remaining eye.

Prognosis.—Though most of my patients became blind, and authors declare capsulitis to be extremely dangerous, I cannot admit that its prognosis is so grave. If the disease is detected in its first stage, it is readily influenced by appropriate treatment, unless it be of a gouty character. Unfortunately, it is often mistaken for incipient amaurosis and treated by topical excitants or by remedies addressed to the nervous system. When the inflammation extends to the iris or lens, we can hardly hope for a favourable issue.

Treatment.—What Professor Rau has written in respect to the treatment of inflammation of the membrane of the aqueous humour is also applicable to a certain extent, to the treatment of capsulitis.

In gouty constitutions, colchicum may be given; unhappily, it has not much influence under these circumstances; attention is also due to the condition of the abdominal viscera, and those who lead a sedentary life should be advised to exercise in the open air. But, as to treating causes, I will confess that although I have diligently sought for the influences on which capsulitis depends, they are still obscure to me, and that latterly I have treated this disease more successfully, though perhaps less rationally, by paying less attention to its etiology.

When I am fortunate enough to be called in the first stage of capsulitis, I direct from ¼ to 1 grain of calomel two or three times a day and mercurial frictions about the orbit. I suspend the calomel two days in each week and administer a large dose of glauber salt, and recommence the mercury, continuing its use until salivation commences. I have never derived any benefit from combining ipecac, digitalis, or other medicines with the calomel. As soon as an amelioration is produced by the calomel, I produce pustulation at the nucha with the antimonial ointment, and after the pustules have lasted six or seven weeks, I introduce a seton and maintain suppuration with savine ointment.

As a general thing, blisters, leeches and cold fomentations are useless except in traumatic cases; venesection in the foot is preferable. I always direct an irritating pediluvium at night, and put the patient in a dark room on strict diet.

In subjects who cannot bear small doses of mercury without ptyalism, I use it cautiously, and administer sulphate of soda freely, alternating it with a solution of iodine, *which is almost a specific against mercurial accidents* (*?*) I use the formula of Helmenstreitt: ℞ *Iodinii,* gr. ij; *Alcohol.* ʒij; *Aq. Canellæ,* ℥ijss; *Syrup simp.* ℥ss; M. A teaspoonful should be taken four times a day, the bottle being shaken.

If the calomel does not produce an amelioration after a fair trial, I pass to the use of corrosive sublimate in the form advised by Jungken: ℞. *Hydrarg. chlor. corros.* gr. ij; *Ext. quassiæ, et ext. glycyrrhizæ, ana,* ℥ss. Fiant pilules xxx. I commence with one pill, and increase the dose until the patient takes five pills, or ½ grain of the corrosive sublimate, daily.

If, notwithstanding this treatment, the disease passes into the second stage, I administer decoction of senega, insist particularly on a powerful derivation by means of the seton, and direct frictions on the forehead with an ointment composed of 1, 2, or even 3 scruples of protoiodide of mercury to two ounces of lard.

The mercurial pills must frequently be continued for four or five months or even longer. The patient must not be confined to a dark room for this long period. He must take exercise, and live on a moderate but nutritious diet.

MEDICAL PATHOLOGY AND THERAPEUTICS.

13. *On the Difference between Phthisis and Tuberculosis.* By RUD. VIRCHOW.

The opinions of pathologists in regard to the nature of tubercle may be divided into two classes. Rokitanski* and his disciples consider it a specific exsudation; Virchow and others regard it as a mere retrograde metamorphosis.

Lebert claims to have discovered a tubercle-corpuscle, which characterizes the specific exsudation of tuberculosis, and Dr. Donaldson, of Baltimore, and other good microscopists in this country, confirm this view, which places tubercle in the same anatomical category with cancer.

Virchow, on the other hand, considers tubercle as co-ordinate with the waxy and fatty metamorphoses, (see *Würtzburg Verhandl.*, band ii., p. 72,) calcification, atheromatous degeneration, etc., but altogether different from cancer, suppuration, the results of inflammation or serous effusion. Tubercle, according to this author, is composed of dead tissues, which have perished in consequence of the accumulation of cells amid their vessels, by which circulation was impeded and nutrition ultimately abolished. When tuberculous metamorphosis takes place in the lungs, Virchow states that the first step consists in an increased epithelial growth in the air-cells. Subsequently these cells fall to pieces, leaving a granular detritus, in which the shrivelled nuclei arising from the remains of cells can be observed as irregular opaque bodies. Virchow says that these nuclei constitute the tubercle-corpuscles described by Gluge and Lebert. The tuberculous metamorphosis may affect either physiological tissues or pathological tissues, as cancer, sarcoma, the products of glanders, typhus, etc., it is everywhere produced by the accumulation in the tissues of cells of the most varied kinds, these cells usually breaking up; so that there is no peculiar element of tubercle.

We have thought it necessary to recapitulate the above views, before giving a brief notice of a later paper by Virchow on the same subject, in which the learned author insists on a difference between pulmonary tuberculosis and pulmonary phthisis.

The expression tuberculous metamorphosis by which he has previously designated the morbid modification by which tubercle is everywhere produced at the expense of the organized elements of our tissues, is now considered inappropriate by Virchow, and he proposes to substitute the term *caseous metamorphosis* (*kasige metamorphose*) as more characteristic.

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* *Handbuch der Allgemeinen Path. Anat.*, p. 413.

It is wrong to regard tubercle and phthisis as identical. The cheese-like exsudation of the pulmonary parenchyma, whether derived from true tubercle or from a thickening of the morbid bronchial secretion, is not a necessary condition of phthisis. Virchow seems to incline to adopt Morton's definition of phthisis:

> "Phthisis pulmonalis est consumptio totius corporis cum febre, a mala affectione et ab ulceratione pulmonum tandem originem ducens. Quæ quidem est phthisis maxima famosa et καὶ ἐξοχὴν dicta, de qua autores tractare solent, tanquam nulla esset alia phthiseos species. Hæcce phthisis pulmonaris est vel originaria, quæ a mala diathesi et ulceratione pulmonum primo instante dependet, vel secundaria et symptomatica, quoties scilicet pulmones a morbis præcedentibus jam altius afficiuntur."

The lung may be ulcerated, and cheesy matter present, and there may be no tubercle after all, the case being ulceration of the bronchi, and the caseous matter only concrete pus. Reinhardt, who sees in tubercle only the results of repeated inflammations, and Carswell, have demonstrated that very many of the lesions of the lungs which are attributed to tubercular disease are only the results of suppurative pneumonia. The cheesy-looking masses which these authors have found in the bronchi and alveoli of the lungs, and which they have proved to consist of thickened pus, do not merit the name of tubercle; for we find in these very masses the true tubercle precisely resembling what is seen in tubercular meningitis. Acute tuberculosis of the lung is as distinct from suppuration as chronic tuberculosis; in both cases the softened tuberculous mass is derived from a grey, cellular structure, remarkable for the friability of its cells, and the great number of their nuclei, which can be nowhere better distinguished and examined than in the mucous membrane of the bronchi. There is, then, a tuberculous bronchitis, in which the bronchial walls secrete pus and contain tubercles, as, in meningitis, we find purulent infiltrations beside the characteristic tuberculous granulations.

Virchow, then, would have us separate tubercle from phthisis. The questions concerning the antagonism between phthisis and certain diseases or certain regions, will be rendered less obscure by adopting this course. The etiology of the two affections can also be more properly investigated. Accustomed as we are to regard tubercle as a product of dyscrasia, as a specific exsudation which necessarily involves a specific alteration in the blood, we are induced to consider pulmonary phthisis as the local expression of a peculiar dyscrasia, dependent oftentimes on hereditary predisposition, and therefore the more hopelessly incurable. —*Verhandlungen der Phy. Med. Gesellschaft in Würtzburg*, Band. III., p. 98.

14. *On the Treatment of Phthisis by Iodine Inhalations.* By M. PIORRY.

M. Piorry read an interesting paper on this subject to the French Academy of Medicine, (Jan. 24th, 1854,) from which we take the following extracts:

The majority of remedies hitherto employed in phthisis have been almost or entirely useless. Various medicinal agents have been vaunted as efficacious in this disease, and then, after a few trials, experience has condemned them, and they have been abandoned and forgotten. Will the preparations of iodine share the same fate? There is reason to hope that this will not be the case, and it is the design of this memoir to set forth the facts which authorize this hope.

I was induced to employ iodine and the vapours of iodine in the curative treatment of pulmonary phthisis by the following circumstances. It was known that iodide of potassium possessed a real and even prompt efficacy in chronic ostitis and periostitis, in scrofulous glandular enlargements, and in many other affections more or less allied with tuberculosis; M. Deyne, an interne of my service, and I, concluded that this remedy would be useful in phthisis, (pneumophymie.) The results of our experiments were very satisfactory. A striking amelioration took place in many of our patients, and this amelioration was real, for of the patients mentioned in my work on Practical Medicine; three or four are still living in the enjoyment of excellent health.

After the successful treatment of hydrocele and tuberculous disease of the testicle by iodine injections, it was natural to attempt to obtain similar results in pulmonary excavations. It would have been difficult, if not impossible, at all events it would have been extremely rash to have injected tincture of iodine into the air-passages. We therefore bethought ourselves of the vapour of iodine.

In hospital practice it was necessary to select the simplest methods of inhaling iodine. One or two scruples of iodine was accordingly placed in a wide-mouthed jar of the capacity of a quart; the vapour of it was disengaged spontaneously with more or less rapidity according to the degree of heat and moisture of the atmosphere.

When we used the tincture of iodine, we poured from one to three ounces in the jar, and heated it until the vapours of alcohol and iodine were liberated.

The patients breathed the air contained in these recipients, and charged with alcoholic and iodine vapour. One inspiration at a time is sufficient, but it should be deep, as when a sigh is heaved. Such an inspiration produces little irritation of the air-passages; it should be repeated one or two hundred times every day, at intervals; for several successive inspirations produce pain in the larynx and bronchi, and cough.

Even during sleep the patient should inhale iodine. For this purpose several saucers, each containing one scruple of iodine, should be placed about the pillow. At the hospital, we attach numerous phials of iodine to the iron frame which supports the bed-curtains. The air thus becomes saturated with iodine; the starched curtains are coloured blue, and the iron of the bedsteads assumes different tints under the action of the iodine.

If a moist starched paper is interposed between the jar containing iodine and the patient's mouth as he takes an inspiration, it turns blue;

if the same air, after traversing the lungs is breathed upon the paper, it causes no change. The inference from this fact, which I have observed very frequently, is that the iodine which entered the lungs is absorbed there, during the brief sojourn of the air in the air vesicles.

The majority of the patients subjected to this treatment at *La Pitié*, *La Charité*, and in my private practice, took also from twenty to sixty grains of iodide of potassium daily. In all those cases in which the extent of the lesions rendered it probable that adhesions, or that remarkable supplementary circulation so well described by Natalis Guillot, existed between the pulmonary and costal surfaces, we had recourse to frictions with tincture of iodine diluted with 19 parts of water. The patients were placed, in some cases, under other modes of treatment: 1. Under the use of tartar emetic in small doses, the fifth of a grain, for example. This heroic remedy was employed chiefly in those cases in which mucous, puriform, or purulent liquids accumulated in the bronchi, and produced a tendency to asphyxia or hypoxæmia. 2. Under the use of astringents, when the state of the intestinal canal required it; albumen, opiates, phosphate of lime, subnitrate of bismuth, etc., were employed with this object, but their use was discontinued as soon as the diarrhœa (enterozhæa) was suppressed. 3. Under the use of quinine; in large doses when the spleen was congested; in small doses when there was simply a nightly exacerbation of fever depending upon the entrance of pus or softened tuberculous matter into the circulation. 4. Upon a nutritious and reparative diet; a very important point, for, surely, if I was called upon to choose between hygienic precautions and the whole category of remedies besides iodine, I should give the preference to a good regimen. 5. Belladonna, opium, and other narcotics were employed, though rarely, to moderate the cough.

The cases which I have treated have not required the use of setons, issues, permanent blisters, or moxas, and I have not been able to comprehend the utility of these artificial pyogenic lesions in a disease in which the formation of pus is a disastrous accident.

Almost all of the patients remained in Paris. They were not sent to Nice or Pisa or other parts of Italy, a country where phthisical patients, coming from the north, in spite of all that has been said, recover no faster and no better than elsewhere.

Thirty-one patients have been subjected to the treatment thus described during the past two years. They all presented, in different degrees, the symptoms commonly attributed to pulmonary phthisis; that is, cough with puriform expectoration, hectic fever, emaciation; the majority of them suffered from diarrhœa, conhected probably with tuberculous ulcerations; in many the larynx appeared to be involved in phymic disease; the majority had spit blood, (pneumoerhæmia.)

All of these subjects presented marked dullness at the summit of the lungs, either under the clavicle or at the superior scapular region. In most cases there was a hardness at these points, perceptible to the finger. Ordinarily it was possible to define the diseased structure accurately, and to distinguish the parts in which there was great condensation from those which had undergone less alterations of structure. In some cases a *bruit hydraérique* could be heard.*

In every case the stethoscopic signs were as positive as those revealed by plessimetry. At the points at which dullness and resistance had been noted, the ear recognized rude or tubal respiration, and more or less resonance of voice. In many cases large cavities were indicated by loud gurgling, cavernous respiration, and pectoriloquy. Each patient expectorated round, opaque, phyoid sputa, the amount of which corresponded to the extent of the disease as determined by other methods of exploration.

I desired to appreciate the effects of iodine with precision, and therefore I did not trust to the indications of plessimetry. I ordered charts, on which were described exact delineations of the diseased parts, and representations of the variations in sound upon percussion which occurred from day to day. In casting the eye over these figures, it will be seen that after four, six or twenty days, six weeks, or three or four months of the iodine treatment, there was in almost every case a diminution in the extent of the surface over which there was at first feebleness of respiration, dullness, resistance, etc.; that, at the same time, the stethoscopic signs indicated an amelioration in the condition of the condensed portions of lung. This result did not occur only in those patients who were slightly diseased, but in almost every case. Numerous patients with cavities in the lungs were apparently cured. The ultimate results were as follows: Decided amelioration in the symptoms and anatomical characters in 20 patients. Disappearance of the anatomical characters and of most of the symptoms in 7 cases. Death, with or without amelioration, in 4 cases.

After some reflections upon the possible mechanism by which iodine operated in the cure of phthisis, M. Piorry concluded with the following propositions:

1. The inhalation of the vapour and tincture of iodine are useful in the cure of phthisis, (pneumophymie);
2. In many cases such inhalation is followed by a diminution in the extent of the indurated parts surrounding tuberculous deposits, and an amelioration in the general symptoms;
3. It is probable that tubercle itself disappears under the influence of iodine inhalations;
4. That inhalations of the tincture of iodine may promote the cure of tuberculous cavities;
5. That after the softening of tubercles, the resulting cavities may cicatrize spontaneously;
6. That compression of the thorax over the points of disease indicated by percussion and auscultation, may contribute to the cure of the local lesion, and to the prevention of pyæmia;
7. That iodide of potassium administered internally, and frictions

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* The sound obtained by percussing over a cavity containing air and liquid. Percussion over the cœcum during typhoid fever often gives excellent examples of it.—Trans.

with diluted tincture of iodine over adherent portions of the lung, are also of great utility.

If, added M. Piorry, any useful therapeutical facts have been brought out in the preceding essay, I would observe that science and humanity are indebted for them to the progress of accurate diagnosis.

After this memoir was read, Dr. Londe observed that vapours of iodine was not the only remedy which could be inhaled with advantage in phthisis; he had employed arseniate of soda inhalations with great success. M. Caventu remarked that this salt was not volatilizable, and that if it had been used in fumigations, that arsenious acid vapours alone had been inhaled. M. Chatin observed that some physicians considered goître and phthisis antagonistic, and that iodine was the real remedy for goître. M. Bricheteau complained that M. Piorry had not alluded to his successful treatment of phthisis by tartar emetic.

M. Moreau regretted that Professor Piorry deemed it necessary to veil his ideas in language differing from ordinary scientific nomenclature; the terms *phymie*, *pneumophymie*, and *phymopneumonie*, which M. Piorry employed instead of the terms, *tubercle*, *phthisis*, *turberculous pneumonia*, etc., produced a deplorable confusion in the mind of the hearer. There was no reason, Prof. Moreau said, to encumber language with neologisms when there were already names for everything.

M. Piorry replied, with huge dignity, that an author who had published a work in eight volumes which had become a classic, had a right to use the nomenclature employed in that work. M. Moreau was not ignorant that Hippocrates employed the word *phymie;* it would be very unfortunate if, in such an assembly, one could not be understood when employing words derived from the Greek.

15. *On the treatment of Tenesmus by the Vapour of Chloroform* By M. Ehrenreich.

In a patient suffering from dysentery, in whom nothing could arrest the continual and painful tenesmus, Dr. Ehrenreich bethought himself of the local use of chloroform. He poured thirty drops into a bottle, which was connected with a tube inserted into the rectum. The bottle was warmed, and the vapour of chloroform was thus introduced into the intestine. After the transitory irritation produced by this operation had subsided, tenesmus ceased and the patient enjoyed immunity from pain for three hours, during which no alvine evacuation occurred. The dejections which followed were more fœcal and contained less blood. The next day the tenesmus returned, but was again subdued by means of the application of a cupping-glass containing chloroform to the anus.—*Annal. Méd. de la Flandre.*

16. *On the Relation between Albuminuria and the Convulsions of Pregnant Women.*

Dr. Depaul read to the French Academy of Medicine, (Jan. 3d,) a report upon an interesting memoir on the convulsions of pregnant women, by Dr. Mascarel, of Chatellerault. The first part of this paper referred to the causes, the second to the treatment of this affection.

The author had examined most of the existing and predisposing causes of eclampsia laid down by authors. He considered the sanguine and lymphatic temperaments, primiparity, and dropsy of the lower extremities, as predisposing causes of convulsions; but he denied that albuminuria was the essential cause of this much-dreaded complication of labour.

The reporter observed that he admitted that convulsions usually coincided with the presence of albumen in the urine, but that he did not believe that it was correct to assert, as M. Cazeaux did, that the urine of patients labouring under puerperal convulsions was invariably albuminous. Three years ago, he (Dr. Depaul) had reported a case of convulsions terminating in death, during the course of which the urine of the patient presented not the slightest traces of albumen. Doctor Lever and Professor Dubois had observed similar cases. M. Mascarel now reported two cases, which had been most carefully observed, in which the same negative fact had been observed.

If albuminuria was the essential cause of eclampsia, why was it that when, from the compression of the renal veins and other causes, albumen was of common occurrence in pregnancy, convulsions were relatively rare. Dr. Blot had observed 41 cases of albuminuria at the *Maternité*, in only 7 of which eclampsia afterwards supervened. Such a small ratio forbids the idea of any direct relation of cause and effect. It might be observed also, that convulsions did not occur in those patients whose urine contained the largest proportion of albumen.

There is another striking circumstance in the history of the albuminuria of pregnant women; this is the rapidity with which the urine regains its normal condition after delivery.

Notwithstanding all the objections which may be urged, however, it is a fact that albuminuria coincides so frequently with puerperal convulsions, that it is of the utmost importance to determine the relation which exists between them.

M. Cazeaux stated that he had modified the opinions which Dr. Depaul had attributed to him. He now believed that eclampsia coincided with albuminuria, not invariably, but in the immense majority of cases. Seven or eight cases, even admitting that they were all carefully observed, as those of MM. Dubois and Depaul had been, could not invalidate a law which was established by a multitude of observations. In every case in which he had had an opportunity of examining the bodies of women who had died from puerperal convulsions, M. Cazeaux had sent the kidneys to M. Rayer, who had invariably discovered more or less alteration in structure. It was very conceivable that the distention of the abdominal veins might produce renal congestion and even granular disease.

17. *On the Prophylactic Influence of Quinine.* By A. **Bryson**, M. D., R. N.

The benefit to be derived from the regular use of the vegetable tonics as preventives of fever in malarious climates, has long been known in our southern States. In the eastern parts of Virginia, where, during the autumnal months, intermittent and remittent fevers are rife, it was the custom of the people to have prepared daily a drink, generally of a spirituous character, but containing either some of the varieties of mint, or some of the vegetable bitters, as gentian, chamomile or cinchona, of which the whole family partook, and to the use of which was attributed their exemption from the endemic fevers of that period of the year.

The introduction of quinine into general use, has, to a great degree, done away with this custom, for it was soon found that though the juleps and bitters of old times were much more palatable, yet that the quinine taken in the same way and at the same time, was a more certain prevention, and consequently it is generally the habit now to give once or twice a week that alkaloid in five or ten grain doses to every member of the family, and that the practice is efficacious in the highest degree, is undoubted.

We notice, in the "Medical Times and Gazette," for January, 1854, a report of Dr. Bryson, of the British Navy, on the prophylactic influence of quinine, when used by the seamen belonging to the men-of-war on the East Indian and African stations, where are met with those malignant fevers so fatal to the white man. He states that it had been a long standing rule in the Navy to give to the men sent ashore in these tropical climates, a drachm of powdered bark, either in wine or spirits, previously to leaving ship in the morning. This practice, although acknowledged to be in some degree useful, had fallen into disrepute, partly because the preparation was nauseous, and more because the dose was too small to act completely as a preventive. Dr. Bryson, therefore, in the year 1847, in drawing up a report on the African station, advised that a spirituous solution of quinine, in the proportion of four grains of the salt to an ounce of wine, should be included among the medical stores of each ship, and that an ounce dose should be administered to each sailor whenever exposed to the exciting causes of fever. Experience soon taught him that it was necessary to keep up the prophylactic for some time after exposure, and he hence continued its use for at least fourteen days after their return on board, in order that the antagonistic influence of the medicine might be maintained, until the incubative period of the disease had expired.

The results on the whole were most satisfactory. Reports from the medical men attached to the various cruisers on the coast of Africa, speak with one voice on this subject. Says one, "Eighteen men were cruising off Barda Point, and Mayemba bay for twenty-four days. They took daily one ounce of the wine containing four grains of quinine, and no sickness occurred. Again, "the boats were frequently cruising in the mouths of the rivers, or else blockading the coast between Delagoa bay and Mozambique. I had frequent opportunities of observing the prophylactic effect of the quinine wine. In only one instance did fever follow its use, and then it was of a mild character. This contrasts strongly with the seizure of a whole boat's crew with fever, in March, 1851, when no wine was administered, as it was lost in crossing the bar of the river." The report of Mr. Sibbald says, that while coaling at Sierra Leone, the weather was very wet, and both officers and men were unavoidably much exposed to the rain. An extra allowance of grog and quinine was given to each man, and continued for some days. Mr. ——, however, placed no faith in its preventive influence, and would not take it. He, alone, suffered an attack of fever, which proved fatal."

Dr. I. Walsh, attached to the "Water Witch," states that "thirty-six men were employed at the attack on Lagos. They were in the river four or five days, and with the exception of three, all took the quinine wine whilst there, and for fourteen days after they left. Five only were attacked with fever, namely, the three men who did not take the wine, and two others who imprudently exposed themselves to the sun, and bathed whilst much heated by violent exercise.

Dr. Bryson gives many other similar reports, and concludes by calling attention to the report of Doctor Burton, surgeon to the flag-ship of the African squadron. The remarkable fact appears that the number of deaths in the squadron has been yearly diminishing until it has come down to an equality with that observed on the more healthy stations. During the preceding year, the ratio of deaths, from disease, to the 1000 of mean force only amounted to 6.9, or less than 7-10ths of one per cent.! He suggests the propriety of adopting some measures different from those now in existence, for the preservation of the health of the seamen employed in the merchant service on the coast of Africa. Vast numbers of these men in the prime of life, die every year, of fevers contracted on this coast, and Dr. B. advises that, instead of carrying a large supply of lemon-juice for the prevention of scurvy, which, in consequence of the abundance of fruits, is nearly useless, that they should be furnished with the quinine wine for the use of the crew, which should be administered in the same manner as in the men-of-war on the station.

SURGICAL PATHOLOGY AND THERAPEUTICS.

18. *Exsection of the Entire Ulna.*

Dr. J. M. Carnochan describes (*Amer. Med. Monthly*, March) a case of ostitis, caries, and necrosis of the ulnar, in which he removed the entire bone, and preserved the functions of the hand and arm. Butts, of Virginia, exsected the entire radius, but no instance has heretofore been recorded of excision of the whole of the ulna.

19. *Excision of the Knee-joint for Anchylosis.*

Dr. Gurdon Buck exhibited to the New York Academy of Medicine (Feb. 1854) a patient whose knee-joint he had excised for anchylosis, resulting from a gun-shot wound. The limb was luxated outwards, and so much deformed as to be useless. Dr. Buck made an extensive crucial incision on the anterior surface of the knee, dissected up the flaps, divided the ligaments, and sawed off the inferior portion of the condyles of the femur, and the articulating surface of the tibia. The patella was excised, except the superior margin. The fresh bony surfaces were secured in apposition by two iron wires, which were suffered to remain for five weeks. The limb was shortened an inch and a half. The patient walked on crutches in three months, and with a cane in six months.—*New York Medical Times,* March, 1854.

20. *Radical Cure of an Aneurism of the External Maxillary Artery, by the Injection of the Acetate of Iron.* By Dr. FILIPPO LUSSANA, of Milan.

Antecedent to the experiments of Pravaz, a celebrated Italian surgeon, Monteggia, had suggested in the treatment of aneurisms "the injection of astringents into the sac, after entering it with a trocar, in order to obtain a prompt and durable coagulation of the blood, the artery being compressed above the tumour." (See *Istituzioni Chirurgiche,* vol. ii, 2nd ed., Milan.) The idea of this operator was never carried out, however, and it remained for the skilful and persevering Pravaz to introduce this great improvement into the practice of surgery. Soon after the researches of Pravaz were made known, and the use of the perchloride of iron in aneurisms had been followed by some disasters, Dr. Ruspini commenced a series of experiments with a view of substituting some less deleterious agent for the perchloride of iron. He finally employed the acetate of the sesquioxide of iron, a salt which contains no principle injurious to the economy, and which possesses great hæmostatic power. This agent had only been employed in cases of slight hæmorrhage and in experiments on animals, when Dr. Lussana determined to employ it in an operation on an aneurism. His experiment resulted most successfully.

M. Gelmi, a girl of 22, presented an aneurismal tumour of the size of a large walnut, between the corner of the mouth and angle of the lower jaw. This tumour was punctured with a small lancet; arterial blood immediately issued in jets. A fine syringe was introduced, and ten drops of the ferruginous solution was injected. The hæmorrhage and pulsations were immediately arrested. The operation caused but little pain and no inflammation succeeded it. In ten days, the tumour had sensibly contracted. An exploratory puncture was made in it, without causing any hæmorrhage.—*Gazette Médicale de Paris*, Feb. 25th, 1854.

21. *Gastrotomy after Rupture of the Uterus.*

Dr. J. T. Gilman, of Portland, Me., reports (*Amer. Jour. of Med. Sciences*, April, 1854,) a remarkable case of gastrotomy in an Irish woman, aged 30, for the removal of a dead child from the abdominal cavity, into which it had escaped in consequence of a rupture of the uterus. It was the patient's third labour. After suffering regular and severe pains during the whole day, the os uteri remaining rigid and dilated only to the size of a quarter of a dollar, the patient complained 11 at night of great abdominal distress, succeeding a pain of unusual severity. There was then an entire cessation of uterine pains. The accoucheur in attendance administered ergot, which naturally failed to remedy the patient's condition. Dr. Gilman being summoned on the following day, found a rent in the uterus extending upwards and backwards from the os. The uterus was firmly contracted. The abdomen was enormously distended, and no part of the child could be felt. An incision was made from an inch above the umbilicus to within an inch of the pubes, and a dead child was extracted after it had remained in the abdominal cavity twenty-one hours. The wound healed favourably. The peritonitis produced by the rupture and subsequent operation was moderate. On the 10th day the wound had united; on the fourth week the patient was able to sit up, and in two months she resumed her domestic duties.

THERAPEUTICAL RECORD.

Angina Pectoris.—M. Carrière (*Bull. de Thérapeutique*) recommends the inhalation of chloroform as a sure means of cutting short the paroxysms of angina pectoris. M. Duchenne, in a later number of the same journal, describes his method of arresting this distressing affection by passing electric currents through the mammary region. Dr. Debout prefers to use arsenic at the dose of ¼ to ½ of a grain, especially in those cases complicated with an organic lesion of the heart or aorta.

Asthma.—Dr. J. P. Root (*Boston Med. and Surg. Jour.*) announces that he has found plaster of Paris an effectual remedy in spasmodic asthma. He advises copious draughts of water impregnated with sulphate of lime on each recurrence of spasm.

Chilblains.—The following application to chilblains is recommended in the *Association Med. Journal:* ℞. Camphor, chloroform and creosote, of each equal parts. Dissolve the camphor in the chloroform and add the creosote; then apply the mixture with a brush.

Chorea.—Dr. Joret (*Moniteur des Hôpitaux,* Jan. 28th, 1854,) claims to have derived the most marvellous effects from the powdered bark of mugwort (*Artemisia vulgaris,*) in a large number of cases of chorea.

Chorea.—Dr. T. J. Garden, of Charlotte county, Va., (*Stethoscope,* March, 1854,) substantiates his former assertions in regard to the efficacy of the black cohosh or snakeroot (*cimicifuga racemosa*) in chorea, and adduces a letter from Dr. Wootton, of Lunenburg, in which several cases, illustrative of the advantages of this remedy, are detailed. Cimicifuga, in addition to its tonic property, is supposed to stimulate the secretions, especially the bronchial mucous membrane, and to exert a powerful influence, probably of a sedative character, upon the nervous system. Many years ago Dr. Garden recommended it in phthisis,* and Dr. Jesse Young reported several cures of chorea effected by it.† Professor Wood declares that he has used it frequently in chorea with complete success,‡ after the failure of purgatives and mineral tonics. The dose is one or two fluidrachms of the saturated tincture three or four times a day.

Delirium Tremens.—Dr. Grieve (*The Medical Chronicle*) relates a case in which the external applications of belladonna dispelled the distressing ocular delusions of a patient labouring under delirium tremens, as soon as the physiological effects of the remedy on the iris were manifested.

Gangrenum Oris.—Dr. Haybach (*Organ. f. d. ges. Heilk.,* 2, 3, 1853,) boasts of the good effects he has derived from the topical application of creosote in gangrene of the mouth. The creosote succeeds better, according to Dr. Haybach, in those cases in which the economy has undergone a septic alteration than when the disease is purely local. We relate these results, like many others in this Record, with great reserve. We presume that Dr. Haybach has confounded *gangrenum oris* with ulcerative stomatitis. For the rest, Dr. Dunglison (*Pract. of Med.,* vol. i., p. 36,) advises in gangrene of the mouth creosote and alcohol, in equal parts, applied by a brush after incisions through the gangrenous parts.

Pneumonia.—Dr. Blakey, of Green, C. H., Va., (*Stethoscope,* February,) declares that he has never lost a patient with pneumonia in his professional life of seventeen years, and that he has never failed "to restore to perfect health the most violent cases in from five to seven days!" The treatment which has been followed by these pleasing results, consists in the administration of tartar emetic, in one fourth grain doses, every two hours, during the night as well as during the day, and the application of a "large vesicatory" over the seat of pain. The antimonial solution is combined with laudanum, unless opium is counter-indicated by the condition of the bowels, and the dose of tartar emetic is raised to one half a grain in obstinate cases. Dr. Blakey treats pleuritis and "inflammations of different portions of the air-tubes by the same method, which is applicable also to "inflammatory rheumatism." "Ten days is the longest period in treating the most violent cases" of the last named disease!

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* *Am. Med. Recorder,* October, 1823.

† *Am. Jour. of Med. Sciences,* ix., 310.

‡ *Practice of Medicine.* Vol. ii., 726.

Salivation.—Dr. Erpenbeck (*Hanover Correspondenzblatt,* No. 6, 1853,) relates a case of profuse salivation occasioned by the mercurial treatment of a serous diarrhœa, in which two and a half grains of extract of belladonna given at intervals during twenty-four hours completely checked all symptoms of ptyalism. When the administration of belladonna was suspended the salivation returned, but was cured by the persevering use of this remedy. Dr. Erpenbeck concludes from this and other cases which he has observed that belladonna constitutes a good prophylactic against ptyalism.

Urine—Incontinence of.—In case of incontinence of urine depending upon atony of the bladder or the presence of intestinal worms, Dr. Deiters (*Orga. Viestel. Zeit.*, 16, 1853,) has found cubebs in large doses a most effectual remedy. According to Dr. Deiters, the pollutions of onanists and the vesical paralysis resulting from falls upon the vertebral column may also be cured by this drug.

Uterine Diseases.—Mr. Hardy (*Dublin Quart. Jour.*; November,) describes an instrument for the topical application of the vapour of chloroform in some painful affections of the uterus. It resembles an ordinary caotchouc bottle for injections, except that between the caotchouc bag and the tube is inserted a metallic chamber containing a sponge for chloroform, and provided with a valve. Fresh air enters by this valve, and is forced through the metallic chamber and tube by compressing the caotchouc bag; it becomes impregnated with chloroform vapour as it passes over the sponge. Mr. Hardy asserts that these vapour douches allay the pain of dysmenorrhœa, chronic metritis, and cancer of the uterus. He has employed the same method with advantage in a case of chapped nipples, and in an obstinate case of *prurigo pudendi.*

Variola.—Dr. Crawford (*Montreal Med. Chronicle*) confirms statements which he made some years since in regard to the great utility of the tincture of iodine as an ectrotic remedy in small-pox. The mode of application consists in brushing over the face with a saturated alcoholic solution of iodine as early as practicable, and repeating this process once or twice daily during the period of the maturation of the pustules. In this manner "the inflammatory and ulcerative processes are controlled, and the intolerable itching is relieved, by which means *scratching* and its evil consequences are obviated."

EDITORIAL AND MISCELLANEOUS.

Medical Society of Virginia.

This Association held its regular annual meeting in its hall at Richmond, on the 4th of April.

The proceedings commenced by an address from the President, Dr. Thomas P. Atkinson, of Danville, which was ordered to be printed.

The committee on nominations reported the following candidates for membership in the Society, all of whom were unanimously elected: Drs. Burwell, Milnor, J. F. Carter and Drew, of Richmond, Terrell, of Henrico, Cole and Woodfolk, of Orange, Gordon, of Essex, Gordon, of Tappahannock, Graham, of Lexington, Mayo and James, of Goochland, McClain, of Montgomery, Beazley, of Greene, Hobson and Michaux, of Powhatan.

Resignations were received from Dr. Charles Minor, of Charlottesville, and two other physicians.

The committee on prize essays reported that only two communications had been received within the allotted time. The prize of fifty dollars was awarded to Dr. J. F. Peebles, of Petersburg, for his essay "On the Treatment of Intermittent Fever." This essay was placed in the hands of the editorial corps of the Society for publication, with instructions to print extra sheets of it for circulation in a pamphlet form.

The treasurer reported that the disbursements of the past year had amounted to $381 25, and the receipts to $222, leaving a balance due the treasurer of $159 25.

The librarian reported a list of books which had been presented to the Society, with the names of the donors.

Dr. Bolton, from the committee on "quack medicines," presented a report in which the other members of the committee, Drs. Leitch and McCaw, had declined to unite.

Dr. Worsham supported the conclusions of the report in regard to the necessity of legislative action for the suppression of the sale of quack medicines.

Dr. Upshur opposed the report, and considered it undignified and impolitic to wage war on a system which the medical profession is powerless to suppress, and to engage in attempts at legislation which only reacted in favour of the abuses attacked.

The report was laid upon the table, and remained there.

The following officers were chosen for the ensuing year:

President. Professor JOHNSON, of Richmond.

Vice Presidents.

Dr. DEANE, of Richmond,	Dr. THWEATT, of Petersburg,
STRIBLING, of Staunton,	LEITCH, of Charlottesville,
WORSHAM, of Dinwiddie,	HAXALL, of Richmond.

Rec. Secretary. Dr. CARTHON ARCHER. *Ass't.* Dr. LEWIS.
Cor. Secretary. HASKINS. *Ass't.* RODDEY.

Treasurer. Dr. BOLTON.
Librarian. P. TRENT.

Committee on Nominations.

Dr. GEORGE MINOR, *Chairman.*

Dr. R. W. HAXALL,	Dr. J. A. CUNNINGHAM,
G. A. OTIS,	F. H. DEANE.

Executive Committee.

THE OFFICERS OF THE SOCIETY AND MEMBERS OF STANDING COMMITTEES, (*ex officio,*) and :

Dr. A. T. B. MERRITT,	Dr. R. G. CABELL,
J. A. CUNNINGHAM,	C. S. MILLS.
J. B. McCAW,	

Editorial Corps.

Dr. T. P. ATKINSON,	Dr. A. T. B. MERRITT,
R. W. HAXALL,	G. A. WILSON,
J. BOLTON,	E. G. HIGGINBOTHAM.
R. A. LEWIS,	

The following physicians were elected honorary members of the Society :

AUSTIN FLINT, of Buffalo,
WILLARD PARKER, of New York,
CHARLES POPE, of St. Louis, and
MARSHALL HALL, of London.

The delegation to the meeting of the American Medical Association at St. Louis was constituted as follows : Drs. Ashby, Atkinson, Beale, Browne, Claiborne, Garnett, Gooch, Houston, Jones, Joynes, Logan, Madison, Mayo, Merritt, Otis, Patrick, Payne, Peebles, Powell, Spilter, Thweatt, Trent, Upshur, Walton, Walke, Wellford and Worsham.

Dr. ATKINSON proposed that *Pneumonia* should be the subject for prize-essays for next year, which was agreed to.

Dr. ATKINSON offered the following resolution, which was adopted:

Resolved, That the members of this Society now present do hereby pledge themselves to each other that they will not receive under their instruction as a student of medicine, any individual who may be grossly deficient in either the mental or moral endowments, or in that preliminary education which is necessary to fit him for entering a profession requiring high intellectual and moral qualifications—and that we respectfully and earnestly recommend to our brethren throughout the State to adopt a similar role of action.

Dr. J. G. CABELL offered an amendment to the constitution, by which the payment of twenty dollars, which sum was to be added to the *permanent fund* (?) should exempt members from future assessments, and constitute them life members of the Society. This proposition was made the special order for Thursday, April 6th, before which day the Society adjourned.

Dr. WALKE, after a pathetic and feeling address, which was listened to with marked attention, offered the subjoined resolutions relative to the death of Dr. L. W. Chamberlayne, which were unanimously adopted:

Resolved, That in the death of L. W. Chamberlayne, Professor of Materia Medica in the Medical Department of Hampden Sydney College, and for a long term of years an honorary and distinguished member of this body, the Medical Society of Virginia has lost one of its brightest ornaments.

Resolved, That we tender our warmest sympathy and condolence to his family in their heavy affliction.

Resolved, That a copy of these resolutions be directed to the family of the deceased.

The printed report of the committee appointed to establish a medical journal was laid before the Society. Dr. LEWIS moved its adoption. Dr. MAYO moved to postpone the subject in order to give members an opportunity of examining the report, and voting on it advisedly. This proposition was rejected.

A lengthy debate ensued, in which it was contended on the one hand that the Society had confided the purchase of a medical journal to the *Executive* Committee, and not to the *Journal* Committee, that the contract by which the "Stethoscope" was purchased, bound the Society to pay exorbitantly, that this scheme would involve the association in debt, that a journal was not needed to publish the transactions of the Society, and that in lending its influence to such a work, the Society was inflicting an ungenerous injury on a private enterprise. On the other hand, the friends of the scheme declared that it would prove a source of great profit to the Society, and that it would exert a powerful influence in organizing the profession and elevating its character.

After the latitudinous debate had drawn to a close, Dr. UPSHUR of

Norfolk, offered the following as a substitute for the Committee's report:

Whereas, It appears from the report of the special committee appointed by the Society at its meeting in Charlottesville, to establish a medical journal as the property of the Society, that however ably conducted this journal has been or may be, the result may involve the Society in a large debt—and whereas, in view of what has already occurred, it is evident that a journal owned and conducted by the Society, by coming into competition with private enterprises of the same kind, conducted by Fellows of the Society, had a feeling heretofore unknown among us, will result and ultimately prove utterly subversive of the objects of the Society; therefore,

Resolved, That the report of the committee be adopted.

Resolved, That a committee of three be appointed with full authority to dispose of the Stethoscope upon the best terms, and to apply the proceeds to the liquidation of the debt which may have been incurred in the purchase and conduction of the journal so far as they go; and that the Treasurer be authorized to make up the deficit of indebtedness from any money in his hands, not otherwise appropriated.

The vote on the substitute stood—AYES 23, NOES 32.

The report of the committee was then adopted, and the physicians already named were elected to edit the organ of the Society.

Dr. UPSHUR observed that he thought it the duty of the Society to interfere as little as possible with a journal already before the profession, which had been established by private enterprise, and he therefore proposed that the Society's journal should be published quarterly. This proposition was rejected.

Dr. TUCKER considered the *editorial corps* too numerous, and moved that two editors should be appointed and paid for their services; which was not agreed to.

Dr. WORSHAM introduced a series of resolutions in which the Society commended the liberality of its publishers, urged its members to support its journal, and recommended the Virginia Medical and Surgical Journal as worthy of the confidence of the profession.

Drs. ATKINSON and GOOCH could not support the last resolution unless they were assured that the conductors of the Virginia Medical and Surgical Journal would not oppose the Society or its organ, and the former member enquired of the senior editor what course he intended to adopt.

Dr. OTIS declined giving any pledges, or stipulating in any way for a complimentary notice from the Society.

Dr. WORSHAM then withdrew his resolution in regard to the Virginia Medical and Surgical Journal.

Dr. S. B. ANDERSON moved to postpone indefinitely the other resolutions proposed by Dr. Worsham, and offered a substitute in which the two medical journals of the State were equally recommended to the profession.

All of these resolutions were laid upon the table.

Dr. PARKER moved that a committee be appointed to prepare an address to the physicians of the State in behalf of the Society's organ;

he said that this was a common practice with churches, in respect to their journals. This proposition was rejected.

The Society resolved to hold its semi-annual meeting in Petersburg, in October next.

The Committees on Prize Essays and on Publication were not appointed.

The New Organ.

At the late annual session of the Medical Society of Virginia, held in this city, it was impossible to avoid coming to the conclusion that the true object of that meeting was not to contribute to the advancement of medical science, not to harmonize the profession or add to the dignity of the doctorate, but to consummate a scheme for publishing in Richmond a society organ; the effect of which would be to retain in the hands of a few individuals in this place whatever power or patronage the Society might possess, leaving to the four hundred members scattered throughout the State the agreeable duty of coming up, like the Israelites of old, once a year to Jerusalem to be taxed.

Every thing was well arranged for the success of this movement. In the first place, at least a third of those present were in some way or other interested personally in its success. The President in his address enlarged upon its advantages. He was a member of the Journal Committee. The Treasurer, after reporting a deficit of two hundred dollars, declared that the Journal would soon rectify this evil and fill the treasury to overflowing. This officer was a member of the Journal Committee. The Librarian, too, told of the Alexandrine wealth with which his shelves would groan under the influence of this wonderful panacea. The *Fellows* became very anxious to know by what lucky chance they had fallen upon this brilliant project which was to build up the society, replenish the treasury, erect a magnificent hall, and found a superb library. The report of the committee that elaborated this plan is now before us, and we will lay before our readers this "new way to pay old debts."

The society becomes the owner of the *Stethoscope*, which apparently has not been very profitable so far, for its editor owed his printers $ 2000. *The society assumes the payment of that debt*, and in addition gives to the late editor $ 500 for the privilege of paying his old printers' bill. All parties are delighted with the arrangement. The late editor transfers his debt of $ 2000, and receives a bonus of $ 500. Messrs. Ritchies & Dunnavant save themselves from the risk of loss, and the society becomes the owner of this lucrative organ—that is, *when they get possession of it;* for Ritchies & Dunnavant hold the "Stethoscope" and its subscription list until they pay themselves their $ 2000,—after that is done they retain it until they are paid at the rate of $ 116 a month, or $ 1392 a year, for printing this Journal. Now the society were told by this same committee, in Charlottesville, that they had offers from responsible printers to undertake this work for less than $ 1000 annually. Then, if the Stethoscope in three years involved its proprietor to the amount of $ 2000, how long will it take to pay this debt, and $ 500 of purchase money, and $ 1392 a year for work which we were told would cost $ 1000 or less—besides building a hall, filling the treasury, and supporting the financial editor?

The committee, however, are charmed with their bargain, for have they not $ 2500 in unpaid subscriptions? They consider these as *cash;* (yes, dear members of the fraternity, keep your risible muscles as composed as possible,) and therefore the Society owes nothing. Of course, then, Ritchies & Dunnavant will take these delinquent subscriptions and exonerate the Society. These experienced publishers *decline that offer.* They have known these debts to be sometimes doubtful. But still they will be liberal. If the Society will leave their scientific researches for a year or two, and act as agents, drummers, and whippers-in for the "Stethoscope," the debts of the late editor will be paid without having to call on the Society's treasury, which is a very lucky circumstance, as there is a yearly deficit reported of about $150.

Everything, then, is concluded, and the editors elect proceed to tell of their subscription list of 900, put down as cash again; every one paying them much better than they paid our friend, the late editor. By way of rapidly enlarging their circulation, they strike out the following method of *soliciting subscriptions,* which we would recommend to all of our friends who are wanting in those great essentials. They sent 150 copies to different persons; they print on the cover, "the post office law rigorously enforced;" none being returned, after the second number, they are all counted as subscribers!

The Society, of course, could not hesitate a moment to adopt so brilliant a scheme as this, although there was not entire unanimity, the vote standing 32 to 23, some persons never being willing to listen to reason, and others being disinclined to break down individual enterprise, in order to enable Messrs. Ritchies & Dunnavant to collect their old debts. However, the act was consummated, and the dominant majority proceeded to return thanks and pay compliments. They proposed to thank the late publishers for the inestimable privilege they had bestowed upon them. Then they resolved all to support the Society organ to the death; and thirdly they offered to speak a good word for the Virginia Medical and Surgical Journal; *provided its editors would pledge themselves not to attack their organ.* In other words this Journal was to sell its liberty for a paltry compliment, to sacrifice the respect of the independent profession, and bow at the shrine of the thirty-two *fellows.* The conductors of this Journal *declined the proposition.* Nay, more! appealing to that high-toned Virginia public for whose approbation and support they have ever earnestly laboured, they commit themselves and their Journal positively in opposition to this movement of a small section of the profession in and around Richmond, and aided by a rapidly increasing band of earnest friends and well-wishers, they will never cease to strive, until this Society is rescued from the bonds which have so long restricted its usefulness, and become in truth, what its name purports it to be, *The Medical Society of Virginia.* M.

The teachers of medicine in Virginia annually set forth to Southern students the advantages of deriving instruction from southern institutions. They dwell, with justice, on the fact that the parallelism between many of the diseases of the North and South is not identity, that our climate engenders distinct causes of disease and modifies its progress; they speak of the difference in constitution of the white and negro; they call attention to those diseases which are peculiar to the South; to that malarial element which the southern practitioner must ceaselessly combat in all its protean developments, and by these and similar arguments, enforce the truth, that while the principles of medicine are uniform, its practice must be learned in the locality in which these principles are to be applied. The medical and secular press, learned association-orators, and a discerning public, not only repeat these scientific considerations, but appeal to other motives, and yet the number of Virginian medical students at northern schools, who turn a deaf ear to these addresses to their patriotism, self-respect, and sense of expediency, considerably exceeds the whole number of pupils in attendance on the medical colleges in our State.

The causes of this deplorable condition of things are manifold. The attractive pleasures of large cities, the prejudice of physicians which sends their pupils to the institution in which they themselves were taught, the traditional excellence and sound doctrine of the "old school" of Philadelphia, the rhetorical and operative display and facilities for obtaining diplomas at "the Jefferson," and the clinical advantages which, according to the "Stethoscope," are enjoyed by students in New York, these, doubtless, are some of the considerations which induce Virginian medical students to forsake the institutions of their own State. On the other hand, it must be confessed that Virginia has never had a medical school enjoying the cordial and unanimous support of the profession. The college which struggled for existence, in Richmond, for sixteen years, while it had many ardent friends, was regarded with indifference by some physicians, and by others with actual hostility. It was condemned as a private enterprise, as an offshoot of a sectarian academy, as a school which had no legal claim to exist, as an impediment to the plans of disinterested reformers, as illiberal and a monopoly, as inefficient and a mere stepping-stone to practice; ultimately, its professors and trustees engaged in open war, and its position was no longer tenable.

Last winter, the legislature organized a new school—the Medical College of Virginia. The profession is anxiously observing the progress of this institution, earnestly hoping that it will make good its claim to the proud title which it bears. There is but little doubt that if the liberal and satisfactory provisions of its charter are judiciously enforced, it will become popular, and useful, and prosperous. If the future conduct of its governors confirms that feeling of confidence which their first measures have already awakened, its success is certain. Much depends on the manner in which the vacancies in its faculty are supplied. If, in selecting occupants for these posts of honour, the trustees set aside all personal considerations, and are solely guided in their choice by the qualifications of the candidates presented to them, as we have every reason to believe will be the case; then, we predict for this school the zealous and united support of the physicians of Virginia. Legislative aid to supply every requisite for varied and thorough medical instruction will not be wanting, and we shall have a scientific college, as we already have a literary college, of which Virginia and the South may be justly proud.

We have alluded, on a former occasion, to the necessity for an extensive nosological establishment for the relief of the indigent sick of our State. We are aware that, in consequence of the active benevolence of individuals, and the ready response of private charity to the appeals of the unfortunate and needy, throughout the limits of this broad commonwealth, the victims of physical distress rarely call in vain for relief or succour. Still, we think that a public asylum should be afforded for those who not only have a small share of the good things of this life, but have small means of averting its evil things. It is not just to burthen individuals and young physicians with the care of the sick poor of the State.

While the necessity of a State hospital is admitted, it is alleged that the parsimony of the legislature precludes the possibility of the foundation of such an institution. We cannot accept this argument. The legislature has already endowed two hospitals for the insane, and an institution for the blind, with the most commendable liberality, and we believe that if its propriety was properly set before them, our legislators would equally provide a general hospital, and afford to the poorer classes in Virginia the same refuge from suffering which is open to the afflicted poor of other States.

But it is not in a moral point of view alone that the necessity of a State hospital is obvious. If our medical college is to be complete and efficient, its students must have access to an extensive field for clinical observation. The exigences of medical teaching require a large hospital. While exhorting students to avail themselves of home instruction, we should make it for their interest to do so. The practical lessons at Southern schools should be as distinctive as possible. The student should be furnished with the amplest facilities for observing the progress and treatment, and studying the history and pathology of those diseases which are of prominent interest at the South.

This *distinctiveness* should be observed in the other practical departments. Besides showing us what disease is here, how it is generated, our teachers of medicine should tell us "what kindly antidotes are sown in the same furrows with its fatal seeds." Several careful students have investigated the medical botany of Virginia. The results of these researches are not, however, widely known. They should occupy a prominent place in every course of lectures on materia medica delivered in Virginia. And no such course can be complete without a full description of the healing sources which nature has so lavishly bestowed on us in our mineral springs. We have every variety of carbonated, chalybeate, saline, thermal, and sulphuretted waters within our borders, and can only obtain information in regard to them from the reports of visitors, the advertisements of proprietors, and a most meagre guide-book.

The water of the chalybeate spring on Church Hill, in Richmond, although it is occasionally employed by physicians, does not hold the high therapeutical rank to which it is entitled. It is a rich alum water, comparing favourably in the amount and proportions of its solid contents with Tunbridge, Wies-Baden and Pyrmont. We have prescribed it repeatedly during the last two years in cases of chlorosis and gastralgia, with great advantage. Ferruginous preparations are in great honour at the present day, and when the richness of this spring in the salts of iron is more generally known, its waters, no doubt, will be extensively employed. It is a clear liquid, with a decided astringent and atramentous taste, but, in consequence of the large proportion of sulphuric acid which it contains, this is not very disagreeable. The following analysis of this water was made by J. C. Booth, a practical chemist of Philadelphia:

	Grains per Gallon.
Total amount of alkaline salts,	184.05
" " salts of iron,	159.05
Persulphate of alumina,	73.00

RATIONAL ANALYSIS.

	Grains in the Gallon.	
	Salts.	Sulphuric Acid.
Sulphate of Potassa,	2.444	1.121
Sulphate of Soda,	1.943	1.094
Chloride of Sodium,	4.627	0.000
Sulphate of Ammonia,	0.643	0.451
Sulphate of Lime,	88.836	52.257
Sulphate of Magnesia,	86.064	57.376

Sulphate of Alumina, (neutral,)	72.928	51.058
Proto-Sulphate of Iron,	24.991	13.153
Persulphate of Iron, (neutral,)	51.270	30.762
Persulphate of Iron, (1-3 basic,)	83.355	41.678
Silica,	00.000	00.000
Phosphoric Acid,	trace	
Total,	427.530	248.950

Professor Booth remarks of this water:

"We regard it as one of the richest and best proportioned of all the alum waters known. It is at the same time an alterative, astringent, tonic and laxative. The large proportion of iron salts renders it an excellent tonic. The aluminous salt tends to give it astringency, but this effect is modified by the laxative agency of the alkaline salts, especially of the Epsom salt. The combination, as a whole, is an alterative. It will unquestionably be regarded as a useful adjuvant to the physician, and a valuable addition to the materia medica."

In a travestied report of the debate on chloroform, at the Richmond Medico-Chirurgical Society, we are credited with the following ineptitude:

"Dr. Otis remarked that it was the opinion of Flourens that poisons, acting upon the whole system, did not require to be increased."

We trust that we may be permitted, without the imputation of immodesty, to state the real opinion which is disguised in this nonsensical paragraph.

The interesting question, whether an increased quantity of chloroform was required to produce anæsthesia in an individual accustomed to its use, having been mooted, Dr. Bolton argued that it was not, and cited the remarkable case of Johnson, a blacksmith of Richmond, who used gallons of chloroform in maintaining himself for months in an almost constant state of inebriation, and who, at the end of this period, found that the same quantity of chloroform produced the same effects as at the beginning.

Dr. Otis then observed, that this testimony was in accordance with the rule laid down by Flourens, "that substances exerting a poisonous effect upon *all the members of the animal kingdom* could not be administered to the human subject in progressively increased doses," and developed this idea somewhat at length.

We may elucidate this principle in a few words. Opium, to take a common example, at the dose of a scruple, is certainly an energetic poison. But an opium-eater becomes habituated to much larger doses. Now many animals eat the poppy with impunity, and it has parasites like the most innocuous plants. Hydrocyanic acid, on the other hand, is a poison to all animals, and habit does not in the least diminish its effects; the dose, therefore, cannot be raised with impunity. An individual who had been taking prussic acid medicinally for months would be destroyed by a grain of the anhydrous acid as surely as one who had never taken it at all.

Chloroform produces its effects on all the beings of the organic scale. Even vegetables, as proved by the experiments on the sensitive mimosa, are subject to its influence. We inferred, therefore, that habit would have no effect in diminishing its influence on the human individual; an inference which is sustained by the results of clinical observation.

Christison and Taylor deny the correctness of this rule in the case of arsenic, and regard the narratives of "arsenic-eaters" as fabulous. Bourchardat and Flandin, however, present many facts in opposition to this opinion of the British toxicologists, and we believe that it is now admitted that, in the southern part of Germany, especially, persons accustom themselves to taking quantities of arsenic which would prove poisonous to adults generally. Flandin* gave to animals one sixty-fifth of a grain of arsenic in their food, and progressively augmented the dose for nine months until they bore fifteen grains with impunity. It is a well known fact among agriculturalists that several of the lower animals are not affected by considerable doses of arsenic.

We hold that "the Organ of the Medical Society of Virginia" has no right to make the members of the humble Medico-Chirurgical Society appear ridiculous. In our own case, the reporter of that impartial periodical may have taken umbrage at the epithet "poisonous" indirectly applied to chloroform, forgetful of the maxim of Linnæus: *Medicines differ from poisons, not in their nature, but in their dose;* but the remarks of several of our colleagues are as unsparingly parodied as our own. These blunders may be the result of carelessness, but carelessness under these circumstances is culpable.

The Medical Society of Virginia, since our acquaintance with it, has occupied itself with the discussion of personal and local difficulties, and vague schemes of professional reform, to the entire exclusion of scientific enquiries. We trust that the "ORGAN" will confine itself to its legitimate mission of reporting these interesting proceedings, and will allow the Medico-Chirurgical Society to pursue its harmless career, without exciting in its members the well grounded apprehension that if they venture to interchange their opinions on medical subjects, they will be incontinently hurried before the public in such scanty apparel as the tender mercies of the reporter for the Stethoscope may incline him to throw around them.

But we do not expect that our appeal will be regarded. We expect little from a journal which copies an article in which we "severely censured," the first "Bill to incorporate a Medical College of Virginia," while publishing the substitute for that bill "without comment;" thereby suppressing our warm advocacy of the *amended* charter of the College, and tacitly placing the Virginia Medical and Surgical Journal, to the disinterested efforts of which the present liberal organization is in a measure due, in a hostile attitude to an enactment which it cordially sustained. [O.

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* *Traité des Poisons*, I. 737.

American Association for the Advancement of Science.

The next meeting of the Association opens at Washington on Wednesday, the 26th of April, and not on the 30th, as stated in the May number of the American Journal of Science.—*Eds. Am. Jour. Sci.*

The Medical College of Virginia.

The first commencement of the Medical College of Virginia took place in the Chemical Hall of the College on the evening of the 16th inst. Although the evening was unfavourable, and gave reason to fear that there would be but a small attendance, yet our citizens disregarded it, and turned out in large numbers to celebrate this era in the History of Medicine in Virginia.

Hon. John M. Patton, President of the Board of Visitors, announced the organization of the College, under the new charter, by the election of the Professors in the late medical department of Hampden Sidney College to their respective chairs in the new College, and congratulated the faculty upon the happy termination of their difficulties, and the charter which the liberality of our legislature had conferred upon them.

The degree of Doctor of Medicine was then conferred upon the following gentlemen by the Dean of the Faculty, who presented them with certificates of their proficiency until suitable diplomas could be prepared, viz. :

Richard A. Belfield,	Richmond	county,	Virginia.
James J. Brumley,	Washington	"	"
George W. Cannady,	Floyd	"	"
George W. Caulfield,	Richmond city,		"
Samuel D. Drewry,	Chesterfield	county,	"
Thomas W. Finney,	Culpeper	"	"
Edwin D. Gibson,	"	"	"
Thomas E. Goolsby,	Albemarle	"	"
John C. Grayson,	Culpeper	"	"
Charles W. Hume,	Orange	"	"
Branch L. Jordan,	Lynchburg,		"
Wm. F. Noel,	Louisa	county,	"
Luther R. Perkins,	Howard	county,	Mo.
Wm. S. Robertson,	Pittsylvania	county,	Virginia.

John L. Scott,	Dinwiddie "	"
J. Moss Smith,	Henry "	"
David S. Watson,	Richmond city,	"
John H. Wayt,	" "	"
Fleming White,	Hanover county,	"
John B. Wiley,	Amelia "	"
John W. Winfree,	Chesterfield "	"

Dr. David H. Tucker then delivered an appropriate valedictory address to the graduates on behalf of the faculty, after which the audience retired well pleased with the scenes they had witnessed. We wish for the Institution many more and more prosperous returns of this happy occasion. [A. T.

In India they have recourse to a singular process for the detection of criminals, which illustrates the influence of *fear* on the secretion of the saliva. When an offence has been committed in a manufactory, all of the workmen who are suspected are assembled in a room, and are required to masticate for a few moments a small quantity of rice. They are confident beforehand that the offender will eject his mouthful of rice quite dry, the necessary effect of fear being the suppression of the saliva.—*Cosmos.*

Spanish Medicine.

In a late number of the *Gaceta Medica* of Madrid, Dr. Avillez attempts to prove that the contemptuous opinion entertained of Spanish medicine by the French school is unfounded, and proceeds to enumerate a long list of discoveries and improvements in medicine which we owe to the Spanish profession.

In the year 550, the Cæsarian section was twice performed, and a Spanish Jew, Abiaban, operated successfully upon the king of Aragon, aged 70, for cataract in both eyes. Gehrar, the Moor, in 1021 ordered all charlatans to quit the country, and established a Medical College, with power to grant degrees upon proper examinations. John, of Castile, appointed an examining board, the members of which were physicians and surgeons, called "Alcaldes Examinadores." In the fourteenth century were founded the two rival schools of Cordova and Toledo, amongst whose teachers were Avenzoar, Averrhoes and Albucasis. Avenzoar wrote on partial paralysis, and the operation of tracheotomy. Averrhoes noticed the metastasis of rheumatism. Villanova and Raymond Tully prescribed calcined sea-weed for scrofula. The moral treatment of the insane was first introduced by the Spanish. They founded the first quarantine, in 1471, at Mallorca, and a special hospital for skin diseases at Valencia in 1067. In the 16th century they boasted of thirty Universities; they investigated syphilis and advised the use of mercury.

Guaiacum, sarsaparilla, quinine and sassafras, were introduced by Spaniards. Bougies were invented by them; they introduced clinical lectures, and claim to have first discovered the circulation of the blood. They assert that the Linnæan system properly belongs to aguna and Alfonso Herrera. The lateral operation was introduced by Francisco Diaz, and the operation of trepanning by Andres Alcarar. There were monographs devoted to petechial typhus, which was called tabardillo; pathological anatomy was encouraged by Porcell. Francisco of Areo founded a rational system of treating ulcers. Ponce de Leon taught the dumb to speak and the blind to read, and the Mexican expedition introduced a new treatment of intermittent fever. The investigations of Morton on chronic pneumonia and tuberculosis were preceded by Caspar Caldera de Heredia. Tobacco and chocolate were first prepared by them. Andres Pequan wrote on chronic enteritis, and his work was the basis of the doctrines afterwards promulgated by Broussais; and the great surgeon Antonio Gimbernat appeared, whose name is associated with an expansion from the crural arch, which is often the seat of stricture in crural hernia. [M.

BIBLIOGRAPHICAL RECORD.

I. *Névrologie ou Description et Iconographie du Systeme Nerveux et des Organes des Sens de l'Homme; par MM. Hirschfeld et Leveillé.* Paris: J. B. Bailliere. 1853.

We are happy to announce the completion of the above magnificent work of MM. Hirschfeld and Leveillé, which has been in the course of publication for the last three years.

M. Hirschfeld was the collaborator with Bougery in the publication of the great anatomical work of the latter, for which he prepared the dissections of the nervous system. His experience also as teacher of anatomy, for the last twelve years, in the *Ecole Pratique*, at Paris, was eminently calculated to enable him to simplify, so far as possible, this difficult study.

The complete work forms a single volume in 4to., of 367 pages of text, containing full descriptions of the nerves and the organs of the senses, with the best mode of their dissection; and 90 coloured plates, including 250 figures drawn from nature. The latter are admirably executed by the able artist M. Leveillé, and, besides illustrating the nerves, include a large amount of general anatomy.

The low price of the volume, in comparison with the other standard works on the subject, combined with its intrinsic merits, peculiarly adapts it to the wants of students and the general practitioner. It is for sale by H. Bailliére, 290 Broadway, New York. [F. J. B.

ERRATUM.—Page 88, 5th line from the top, for *nosological,* read *nosocomial.*

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

ART. I.—*On the Epidemics of Raleigh and its vicinity during the year 1853.* By W. H. McKee, of Raleigh, North Carolina.

There is no section of country more exempt from epidemics than this immediate location. The city of Raleigh is in the centre of the county of Wake, North Carolina, in latitude 35° 47′, longitude 78° 48′. The population, including both city and county, is 25,000. Raleigh is about 140 miles west from the ocean, and separates the arenaceous from the argillaceous lands. The land is generally poor. Its growth is principally pine, hickory, gum, dogwood, oak, and black-jack. It is well watered, and in some places, flat and swampy. Towards the west, the country is hilly and rolling.

In the month of January, 1853, an epidemic of pneumonia appeared twenty-five miles south of Raleigh, and extended through a pine and sandy country, which was low and wet for twenty miles. It was confined to that immediate locality, and proved more fatal than any similar epidemic within the knowledge of the oldest inhabitants. I attended some of the cases which occurred on the northern extremity of the section above alluded to. These were of an obscure and masked character; and assumed the livery of other diseases. The invasion of the malady was often sudden, sparing neither old nor young. Many labourers were attacked while at work, after having ate a full meal; in others, the disease commenced at night, after they had retired to rest. Some would first be taken with a chill; others with a pain over one or both eyes, but more commonly over one, and that the left eye! Pains in the shoulders were not uncommon. Some would have slight cough, with pain in the side, fever, restlessness, and delirium; while others would be cold, stupid and uncomplaining, with dusky skin, feeble pulse, great thirst, pale and flabby tongue, which was coated with brownish fur. It was often difficult to confine these patients to their beds. If they were not relieved by proper treatment or by death, the tongue became dry, black, and fissured. When bleeding was practiced, few recovered.

The physical signs were well marked. There was slight dullness on percussion, and the respiration was more or less tubular with crepitus. The absence of cough and expectoration, in the early stage, would often deceive the attendant, if not well acquainted with the character of the epidemic. At the onset of the attack, the domestic practice usually was to give a dose of castor oil and spirits of turpentine; to apply a hot mush poultice to the seat of pain; and, if necessary, heat to the extremities. The first cases I saw, had all been treated in this way. I found them generally prostrated, restless, with typhoid symptoms rapidly approaching. The usual treatment instituted at this stage of the disease, which was about the second or third day, was to apply a blister over the diseased lung, and to give the following combination: ℞. *Quinæ sulph.*, gr. v; *hyd. chlor. mit.*, gr. j; *pulv. capsici*, gr. j; *pulv. camph.*, gr. j, *ad* gr. iij; *pulv. ipec. comp.* gr. v. M. One of these powders was administered every four hours. Alternating between each dose a tablespoonful of the decoction of senega, and allowing the free use of flaxseed tea. If there was great restlessness or profuse perspiration, the free use of brandy would arrest the sweating and calm the restlessness. In some cases, the mercurial effect was soon manifested; when this occurred, the calomel was discontinued, and the quinine, senega and brandy persevered in for a few days.

Under this treatment, they recovered within a few weeks, so as to go to businesss; but it was necessary as soon as convalescence set in, to guard the patient from imprudent eating; for many think they must eat, and will have such diet as they are accustomed to when well.

After the subsidence of the epidemic south of Raleigh, which lasted about two months, it made its appearance north-east, a distance of thirty miles, from where it had prevailed so fatally, skipping over several large creeks and Neuse river. Here it was confined to a small section similar to the one south, but instead of attacking all classes indiscriminately, it was principally confined to the blacks. This was in the month of March. Here, I was called in early, and treated some twenty cases on the plan above mentioned, with success. Three cases which were bled and recovered, two whites and one black, subsequently came under my care with empyema. I tapped the whites and they recovered. The negro was too far spent to be benefitted by the operation. The treatment after tapping, was the free use of the tincture of muriate of iron, and, occasionally, the addition of spirits of nitre, if œdema manifested itself either in the feet or face. The epidemic disappeared by the first of April.

A number of sporadic cases occurred at various points, but yielded to the plan of treatment instituted in the epidemic. Some few cases I ventured to bleed, when I found great pain and dyspnoea, but in every instance in which I bled, the convalescence was protracted. The stimulating plan was evidently the more safe and successful.

During the spring there was a general tendency to bowel diseases, and in some localities, fever of a typhoid character supervened. In one family of sixteen, thirteen were sick nearly at the same time. For this, I found a local cause—a large pond of water in the rear of the dwelling. They all recovered but two—an old lady of seventy-eight, and the head of the family, a gentleman about forty-five years of age. He had been worn down with fatigue, nursing and attending upon the others. He was supposed to be convalescent, but was taken, on the night of the eighth day of his confinement, with a hæmorrhage from the bowels, so profuse as to prostrate him immediately. He could not be raised in bed, and as he lay, it continued to flow from him in spite of all the efforts used to prevent it, until death closed the scene.

I met with several cases of melaena, which yielded to the free use of mercurial purgatives, port wine and tannin, with a liberal use of ice. Two cases were in children. One died and the other recovered. In all the cases there was a marked tendency to purpuric symptoms.

Dysentery during the summer appeared to prevail generally and was confined to no local section. It was attended with the usual symptoms characteristic of the disease. It was easily managed and yielded promptly to proper treatment. The worst cases which came under my observation, were made so by improper domestic management, and the too free use of meat diet. The treatment most successful in the epidemic was the saline and opiate method, combined with the mineral acids. A seidlitz powder given would operate several times, and during its operation the blood and mucus would cease to be discharged, but as soon as the effect of the powder had passed off it would return. At this stage a solution of aromatic sulphuric acid and laudanum was administered after each operation until it ceased. The following is the manner of employing the acid solution: ℞. *Acidi sulphurici diluti, et tinct. cardamomi comp. ana*, ℥ss.; *Aquæ*, ℥xj. M. A tablespoonful either with or without laudanum, according to the judgment of the physician; when there was pain the laudanum should be added to each dose. The seidlitz powder may be repeated again in a day or so, should the disease fail to yield to the first one. Under this mode of treatment the cases recovered in several days, provided they were confined to a strict diet of well cooked vegetables. Many relapsed from eating meat, which, in every case, aggravated the disease and prolonged their convalescence.

Hooping cough has prevailed here for the last twelve months epidemically, and has proved fatal in many instances, especially with those who had other diseases supervening upon an attack, for instance, cholera infantum, pneumonia of children, etc. Mumps and measles can hardly be said to have prevailed as epidemics, as sporadic cases are occurring at all times.

ART. II.—*Hospital Practice.* (Second article.*) By GEORGE L. UPSHUR, A. M., M. D., Surgeon to the U. S. Marine Hospital, Norfolk, etc., etc.

CASE XIX.—*Tape-worm expelled by Oil of Turpentine.*—Henry Black, æt. 28, by birth a Swede, entered August 5th, 1853, with the ordinary symptoms of chronic dysentery. He was a good deal emaciated, and had seven or eight muco-bloody stools every twenty-four hours. There was little or no fever, and no abdominal uneasiness, except when at stool. These symptoms had existed for two months, and were attended from the commencement with a morbidly large appetite. Black was treated with calomel and Dover's powder, Hope's nitrous acid mixture, acetate of lead and opium, the chalk mixture, and counter-irritation along the track of the colon, until the 18th inst., but without any improvement.

On that day he informed me that about six weeks before he came to the hospital, he had discharged from the bowels something white, resembling a piece of tape, about three feet in length. I immediately ordered his food to be curtailed one-half, and gave him fifteen drops of oil of turpentine every three hours during the day time. This treatment was continued until the morning of the 21st, when he was ordered the following draught upon a fasting stomach, no food to be taken until it should cease operating: ℞. *Ol. Terebinth; Ol. Ricini,* aa. ℥j.; *Acaciæ* ʒj.; *Aquæ* ℥iij. M. The medicine acted nine times, the ninth evacuation bringing away a tænia which measured just ten feet. The dysenteric symptoms disappeared without treatment, in a day or two; the appetite at once became natural, and the patient was discharged on August 25th. This is the third case of tænia expelled by oil of turpentine, which I have seen within the last twelve years.

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* See *Ante, Vol.* II, p. 433, *et seq.*

Case XX.—***Dysentery.*** Henderson, æt. 18, well grown, lymphatic temperament; entered August 8th. Was seized two days before with griping and diarrhœa, the stools being at first feculent, but in a few hours becoming mucous and bloody, and accompanied by fever and distressing tenesmus. During the twenty-four hours preceding his admission he had fifteen stools. His skin was hot and dry; tongue clean, but very red; thirst intense; great abdominal tenderness; pulse 120, small and resisting; no appetite. ℞. ***Plumb. Acet.*** gr. xxiv.; ***Pulv. Opii,*** gr. vi. M. Fiant. pil. xij. S.; one pill to be given after every stool—apply sinapisms to abdomen.

August 9th.—Seven stools since last visit; less fever; pulse 100; pain mitigated. Continue treatment, and give fifteen grains of Dover's powder at bed-time.

August 10th.—Two stools since yesterday, natural; is free from fever and pain, and desires food. He had no return of dysentery, and was discharged well on the 13th.

Case XXI.—Norsworthy, æt. 34, sanguineous temperament, entered August 8th. Seized four days before with frequent bloody slimy stools, pain and fever. The operations were very small, and accompanied by a good deal of pain. Ordered two ounces each of Epsom and Rochelle salts, to be taken at once, and at bed time two grains of opium. There was some mitigation of the symptoms on the next day, the salts having acted copiously, producing watery stools. On the 10th, the bloody slimy stools returned, with tormina and tenesmus, but no fever. Ordered acetate of lead and opium after every stool, as in Case I. The operations gradually became less frequent, and more natural until the 14th, when the following was directed: ℞. *Tinct. Catechu,* ℥i; *Cretæ. Prep.* ʒi; *Tinct. Opii,* ʒiss; *Aquæ.* ℥iij. M. S.—a table-spoonful every three hours. The patient was discharged cured on the 24th.

Case XXII.—Smith, æt. 34, sanguineous temperament, very stout, entered August 31st. Seized on the 25th with griping pain across the epigastrium, and nausea, but no disturbance of the bowels, until the night of the 27th, when he had 15 small muco-bloody stools, with much pain.

Present Condition.—Four stools to-day, small, slimy and bloody; skin moist; pulse 80, soft; abdominal tenderness; some appetite;

tongue clean and red; thirsty and restless. ℞. *Plumb. acet.* gr. xx; Pulv. Opii, gr. vj. M. Fiant pil. xij. S.—one pill every two hours.

Sept. 1st.—One stool since yesterday, less bloody; slept well; no fever; appetite. Ordered one pill after every stool, bread and milk diet, in small quantities. Continued to improve, and was discharged cured on the 8th Sept.

Case XXIV.—Perry, æt. 18, slender figure, lymphatic temperament, entered Oct. 22d. Seized on the 6th with painful muco-bloody stools, very small, and frequently repeated. Thinks he has had little or no fever, but is a good deal emaciated; appetite small; tongue red and pointed; very thirsty, especially at night; skin dry and warm; no nausea; pulse 120, small and irritable; bowels are moved about a dozen times in the twenty-four hours, with distressing tenesmus. ℞. *Pulv. Dover*, gr. xv.; *Hyd. Chlor. Mit.*, gr. v. M. S. To be given at bed-time.

Oct. 23d.—Had about six stools last night; less tenesmus, and less blood; did not sleep well; thirst; no appetite; tongue very red at the tip and edges, and coated yellow in the centre; pulse 110, full; altogether says he feels better than when he entered. ℞. *Plumb. Acet.* gr. xii; *Pulv. Opii*, gr. iij. M. Fiant pil. vj. S. One pill every two hours. Bread and milk diet in small quantities, and avoid *cold* drinks.

Oct. 24th.—A slight improvement since yesterday—six stools, less griping since yesterday's visit; other symptoms as yesterday. ℞. *Acid nitrosi*, ʒi.; *Tinct. Opii*, gtt. xl; Aquæ Camph. ℥viii. M. S. A wine-glass full every three hours.

Oct. 25th.—Took all the solution; eight stools with no change in the character of the pain; they are large, however, and contain less blood and slime; pulse still quick and irritable; less thirst. Ordered thirty drops of oil of turpentine in half a wine-glass of water, three times a day.

October 26th. Cannot retain the turpentine; eight stools of the same character as before; is feverish and thirsty; tongue foul and red. ℞. *Mass. hyd.*, gr. xii; *pulv. opii*, gr. vi; *aquæ*, ℥j. M. S. A teaspoonful every 3 hours. Sinapisms to the abdomen.

October 27th. But two stools since 8 o'clock last night; less slimy and containing no blood; slight nausea; tongue less coated; no fever. Continue treatment.

October 28th. Five stools since yesterday, but they have changed their character; are larger, and contain little or no slime or blood; no pain nor fever; appetite returning. ℞. *Tinct. catechu*, ℥j; *cretæ prep.*, ʒiss; *tinct. opii*, ʒj; *aquæ* q. s., ℥ iij. M. S. A tablespoonful every three hours. This prescription was continued until 30th, when there being no improvement, the following was substituted: ℞. *Ext. nucis vom.*, gr. viii; *mass. hyd.*, gr. xv; *pulv. opii*, *pulv. ipecac*, aa gr. vi; M. Fiant pil., xij. S. One pill 3 times a day. From this time, the patient rapidly convalesced, and was discharged cured, on 7th November.

Case XXV.—Tabor, æt. 24, delicate frame, lymphatic temperament, entered December 10th. Seized a week before with griping and diarrhœa: stools soon became slimy and bloody, and the patient had fever. These symptoms have increased during the last three or four days, the stools being now very painful and small, and consisting entirely ly of blood—has had at least eighteen within the past twenty-four hours; tongue red and clean; anorexia complete; no fever; abdomen tender upon pressure. ℞. *Magnesiæ sulph. et sodæ et potass. tart.*, aa. ʒij. M. To be given at once. At bedtime, two grains of opium. This prescription was ordered at the morning visit, on 11th.

December 12th. Salts operated well, giving large and almost painless stools; patient slept well; has had but two stools since bedtime, which contained very little blood; is sweating profusely; no fever. ℞. *Plumb. acet.*, gr. xxiv; *pulv. opii*, gr. vi. M. Fiant pil. xij. S. One pill every three hours. From this time, the dejections became less frequent and more natural, and the pills were gradually discontinued, the diet being only bread and milk, in moderate quantities, with the positive prohibition of cold drinks. The patient was entirely cured on the 18th December.

Case XXVI.—Russell, æt. 43, large frame, bilious temperament, entered Jan. 20th, 1854. Seized nearly three months ago, while at Callao, with fever, accompanied by muco-bloody stools, nausea, pain and all other symptoms of well-marked dysentery; has had little or no treatment until recently, when he took laudanum and elixir vitriol pretty freely, and he thinks, with benefit.

Present condition.—Emaciation very decided; feeble; tongue pale, except at the edges, flabby and slick; pulse 110, irritable; great thirst; appetite ravenous, says he can eat *any thing;* great tenderness on pressure along the track of the colon; has had eight bloody stools since yesterday morning, accompanied by pain and griping. ℞. *Emp. canth.*, v; xvj, *pol.* To be applied to the abdomen. ℞. *Ext. nucis vom.*, gr. viii; *pulv. opii, pulv. rhei*, aa. gr. vi; *mass. hyd.*, gr. xx. M. Fiant pil., xij. S. One pill 3 times a day. Half a pint of milk and a small piece of wheat bread per day.

January 21st.—Blister has drawn well; seven stools since last visit, accompanied by the usual pain, and containing nothing but bloody slime; slept well; is flatulent, pulse more forcible; appetite unchanged. Continue treatment.

January 22d.—Four stools during the night—less bloody, the last one being nearly natural; less appetite; pain upon pressure disappearing; no fever. Continue treatment.

January 23d.—Has obtained food without consent, and eaten very heartily; eight stools as painful and bloody as ever. Continue pills, and restrict him to the diet already prescribed.

January 24th.—No stool for seven hours; blister has healed; appetite still ravenous; abdominal tenderness decided. Re-apply blister and continue treatment.

This treatment was continued until the 8th of March, when the patient was discharged, cured. Frequently during the progress of his case, he would steal out of the hospital and buy bread and milk, and sometimes meat, from the neighboring tavern—and in every instance, there was an aggravation of all his symptoms. A single imprudent meal being sufficient to increase his stools from two to twelve in twenty-four hours. He would doubtless have been cured much sooner had it been possible to control his unnatural appetite.

Diet, of the proper kind and in the proper quantity, is of the first importance in the treatment of dysentery. Without attention to this, all our remedies will prove utterly valueless. I have repeatedly seen a patient relapse into a condition worse than when the treatment was commenced, by a little too much of apparently the blandest food.

In regard to the treatment of dysentery, the lancet is undoubtedly our sheet-anchor, if the disease is very acute, the patient robust, and the case early seen. Where the tenesmus is urgent, and the dejections pinched and very bloody, saline cathartics have produced, in my hands, more speedy and decided relief than any other remedy. Full doses of acetate of lead and opium will also be found of great service in acute cases, and a combination of nux vomica, opium, ipecac, and blue mass, in those which are chronic.

Before closing my remarks on this head, I cannot avoid recording my dissent to the practice of administering ice and iced drinks in the thirst of acute dysentery, as recommended by Dr. Mettauer, in the March number of this Journal. I have yet to see the first case in which the tormina and tenesmus were not aggravated by the exhibition of very cold drinks. We know that in acute gastritis nothing is more grateful to the patient, or tends more to alienate his distress than pounded ice. Why a different effect should be produced by the same agent in inflammation of the mucous coat further down the alimentary canal, I cannot tell—but such has been the result of my own observation and of that of the brethren with whom I have conversed; so that I am as much afraid of ice in dysentery as of opium in cerebritis.

Constipation.—CASE XXVII. Hudgins, æt. 40, large frame and very obese, entered August 31st, 1853. He fell sick on the 28th, the bowels not having been moved for several days, with pain in epigastrium, and nausea. His complexion is sallow; tongue foul; breath offensive; pulse 75, full; headache; skin dry, no appetite; says his bowels are habitually confined; that he suffers frequently from nausea, but in other respects is very well. ℞. *Pil. cathart. comp.* iv. To be taken at once.

September 1*st.*—Passed a restless night; nausea; no appetite; pulse

100, quick; bowels not moved; no abdominal tenderness. ℞. *Ol. Tiglii*, gtt. iv.; *hyd. chloridi mit.*, gr. x. M. Fiant pil., iv. S. One pill every four hours, until the bowels are freely moved.

September 2d.—Took one pill which acted three times copiously, bringing away a large amount of hardened fœces, with great relief to the patient. ℞. *Ext. gentian*, ℈ij.; *pulv. rhei*, gr. xv.; *pulv. aloes*, gr. x.; *mass hyd.*, gr. xx. M. Fiant pil. xx. S. One pill 3 times a day. The patient was discharged on 6th September, with his bowels in very good condition. He continued the pills for several weeks after he left, and in January last, he informed me that he rarely suffered from constipation then, and was in better health than he had been for many years.

Case XXVIII.—Walters, æt. 48, lymphatic temperament, large frame, entered Sept. 23d. Constipation commenced four weeks before; bowels have not been moved for more than a week, and he says it requires enormous doses of medicine to procure an evacuation; is dull and apathetic; sallow complexion; general abdominal uneasiness, without actual pain; nausea; foul tongue; anorexia; no fever. ℞. *Ol. tiglii*, gtt. iij.; *saponis*, q. s. M; pil. iij. S. One pill every four hours until bowels are moved.

September 24th.—Took all the pills without producing more than one very small stool. Ordered two drops of croton oil at once, which acted copiously, with great relief; and on the next day, he commenced the use of the pills prescribed for Hudgins, which were continued until 10th Oct., when he was discharged, entirely relieved.

Case XXIX.—*Acute Pleuritis—Sudden death on fourth day, from a Fribrinous Concretion in Right Ventricle.* Miller, æt. 35, slight figure, lymphatic temperament, entered October 11th, to be treated for chronic rheumatism, from which he had suffered for several months. On Dec. 8th, he was sufficiently well to walk about the grounds, and he exposed himself, when thinly clad, to a chilling east wind. He was seized with an ague during the night, accompanied by hacking cough, violent pain near the right nipple, and followed by a considerable febrile movement.

At the morning visit, on the 9th, I found him with an irregular pulse, feeble, 120; slight cough without expectoration; hurried respiration, 36; face flushed; inability to lie upon the right side, and very thirsty. Auscultation showed a dry friction sound opposite the right nipple, and a confused action of the heart, with an indistinct first sound. ℞. *Antimonii et potass. tart.*, gr. ij.; *syr. scilla*, ℥ss.; *tinct. opii*, ʒss.; *aquæ*, ℥iij. M. A tablespoonful every two hours. Sinapism over region of pain.

On the 10th, he was no better—the pulse remaining soft, frequent and irregular; pain persistent; and distressing dyspnœa. I ordered that six drops of the tincture of digitalis should be added to each dose of the solution.

December 11*th.*—Pulse less frequent, but still very irregular; action of heart as on the first day; bowels regular; face flushed; dyspnœa and pain. ℞. *Hyd. chlor. mit.*, gr. vj.; *ant. et potass. tart.*, gr. iij.; *pulv. digitalis*, gr. ij. M. Pil. xij. S. One pill every two hours.

December 12*th.*—Dyspnœa more urgent, but less pain; friction sound disappearing; decubitus on left side with the head tolerably low; pulse continues irregular, 96, and soft; very little cough; expectoration consists of tenacious mucus. Continue pills.

December 13*th.*—Passed a very restless night, frequently muttering to himself and calling for water. When the steward visited him this morning, at 7 o'clock, he said that he felt much better; was able to turn upon the right side, and felt no pain. He asked for his breakfast, and partook of a chip of bacon, some crackers and half a cup of coffee, with decided appetite. He requested some one in the ward to set his coffee by the stove to be kept warm, stating that he would drink the balance of it bye and bye. As soon as the cup was taken out of his hand, he suddenly uttered two groans and expired.

Autopsy seven hours after death. Thorax only examined.—The pleura was adherent to the ribs, over the whole of the right lung anteriorly—very much thickened, and covered continuously with unorganised lymph. Just posterior to the sternum, at its centre, there was a deposit of about an ounce of pus; cavity of the right pleura contained twenty ounces of serum;—left lung was attached loosely to the ribs anteriorly by old adhesions; pericardium was three times its normal thickness; contained little or no serum; heart hypertrophied slightly, was filled with blood, and in the right ventricle was found a fibrinous clot, devoid of coloring matter, very firm, three inches long and three quarters of an inch in diameter, the ends tapering like a gimlet handle, one being entangled in the columna carnea of the ventricle, and the other hanging free about half an inch through the orifice of the pulmonary artery. The right ventricle was a good deal dilated, the left contained a small clot of recent formation, and the semi-lunar valves of the aorta exhibited upon their edges some old vegetations.

I could not learn from this patient whether his chronic rheumatism had been ushered in by an acute attack. It is probable, however, that such was the case, and that the morbid condition of the heart was produced at that time. It may be, that the fibrinous concretion was at first wholly within the ventricle, but by the constant action of the heart one end became detached, and being carried by the current of the circulation into the pulmonary artery, offered such obstruction to the passage of the blood as to produce almost instantaneous death. The state of the clot—its firmness, and the entire absence of red particles, conclusively show that it had been formed for a long time before the pleuritic attack.

Case XXX.—*General Dropsy following Panama Fever—Death—Post-mortem Appearances.*—Hill, æt. 48, small stature, sanguineous temperament, entered Nov. 11th. Three months ago he was upon the Isthmus, where he had an attack of "Panama fever," which lasted two weeks, and from which he thought he had entirely recovered. Two weeks after his convalescence commenced, and when he had become quite strong, he was seized without premonition, with dyspnœa and slight cough, without expectoration. In about three weeks some dropsical symptoms made their appearance about the lower extremities and scrotum, and these have steadily increased up to the present time.

When he entered, his abdomen was enormously distended with fluid. There were great dyspnœa—cough—a full, frequent pulse; œdema of the face, upper and lower extremities, and constipated bowels. The dullness upon percussion over the præcordia was more extensive than natural; the sounds of the heart distant and confused; the percussion over lower lobes of both lungs was dull, and there was mucous rhoncus throughout the chest; secretion of urine was very scanty; thirst intense; skin dry, and the patient unable to lie down without raising the head and shoulders.

He was treated with a purge of elaterium every other day, and a combination of calomel, digitalis and squill, in a small dose, three times a day. In the course of a week, he was slightly ptyalised, and the effusion had disappeared from every part except the cavity of the peritoneum. On the 3d of December, he commenced using, in conjunction with the purgatives, iodide of potassium, five grains, three times a day, which was gradually increased to ten grains at a dose. This remedy produced more diuresis than anything he had previously taken; and frequently I have seen the fluid in the abdomen lessened one-half, in the space of twenty-four hours; but there was never a sufficient decrease in the distension to permit me to examine the liver and other abdominal viscera by palpation.

As fast as the effusion was lessened by action upon the bowels and kidneys, a fresh quantity would collect, the patient in the meantime becoming every day more emaciated, and the system refusing to respond to the impression of remedies as in the beginning. On the 31st of January, finding him breathe with great difficulty, in consequence of pressure upon the diaphragm, I tapped him and drew off three gallons of straw-colored fluid, very transparent, and highly albuminous. For twenty-four hours after the operation, the patient was more comfortable than he had been for some months—but the abdomen soon became distended with gas—the respiration embarrassed—the countenance anxious, and the patient died on the 3d of February with all the symptoms of acute peritonitis, except pain, of which he suffered not a particle, even when firm pressure was made upon the abdomen.

Autopsy twenty-three hours after death. Abdomen only examined. Body very much emaciated; abdomen distended and tympanitic; a drop of pus was pressed out of the puncture made by the trocar. On cutting through the abdominal parieties, the muscles were found very much attenuated—and there was almost an entire absence of the subcutaneous *adipose* tissue. The peritoneum was thickened to the extent of *two lines*, and as it lined the transversalis muscle, resembled a thick unyielding fascia—smooth and uninjected. The abdominal cavity contained two gallons of straw-colored serum, with flocculi of newly effused lymph floating about in it. The omentum majus had entirely disappeared. All the abdominal viscera were glued together, and the peritoneum over the intestines was injected purple, and covered with flakes of lymph. There extended from opposite the puncture, on the inside, a marbled appearance, purple, approaching black, but there was no puncture visible, nor could a probe be passed through from the outside. The intestines were distended with gas, but the mucous coat was healthy, except it was very pallid. The kidneys were sound—the liver more than double its normal size, extended far over to the left side, and the right lobe reached down as far as the anterior superior spinous process of the ilium, and was thickly studded with points of newly effused lymph—the color was yellow—structure fatty—texture friable—gall bladder distended with dark bile—no obstruction of the vena porta. The stomach was abnormally large and the coats atrophied. The peritoneum could be easily stripped off in large flakes from the transversalis fascia, and its folding in to form the suspensary ligament of the liver, was beautifully shown. The bladder was not examined.

ART. III.—*On the Utility of Applications of Hot Water to the Spine in the Treatment of Typhoid Pneumonia.* By WALTER F. JONES, M. D., of Petersburg, Va.

During the prevalence of pneumonia on James river, in Prince George county, during the winter and spring of 1846–47, I observed many cases of this disease in which the application of hot water to the spinal column was productive of great benefit, in favouring reaction, and relieving congestion.

From a large number of cases, I have selected the two following to illustrate the happy effects of this method of treatment, when judiciously employed:

CASE I.—A strong, athletic negro man, 25 years of age, had been sick for eight or nine days. He exhibited all the symptoms of well marked typhoid pneumonia. His system was reduced by the injudicious use of purgatives and emetics. I found him in the following condition: He was lying on his back with his knees drawn up; skin cool and rough; countenance sunken, pulse low; disinclination to move, and evident symptoms of considerable cerebral disturbance; his tongue was loaded with a thickly brownish fur, and slightly red and pointed; bowels sunken and tender, with a slow and occasional hurried respiration, interrupted frequently with cough, followed by expectoration of a muco-purulent appearance, which latter, I was informed by his master, had a few days previously been dark brown, and slightly bloody. There was evident flatness over both lungs, but the right lung seemed to be most involved. For several hours previous to my visit, blisters had been on the surface, without producing any vesication whatever, so entire was the inactivity of the capillary circulation. Whilst in the above condition, the patient was placed on the floor on his face, and about five gallons of water at a temperature so near the boiling point as barely to allow the immersion of the hand, was thrown immediately on the spinal column, which seemed to arouse his sensibilities somewhat, as shown by an effort to cry out; he was well rubbed and wrapped in blankets, and removed to bed. Fifty drops of laudanum, with a small quantity of thin starch, was thrown up the bowels by injection, and pressure applied to aid him in retaining it, which he did. In a short time he was asleep, and slept for two hours. During his repose, he seemed to breathe with more freedom, and upon an examination of his pulse there was evident improvement, and a very rapid approach to reaction took place. Nourishment was offered, which was taken, when very soon after he fell into a deep and quiet sleep.

I left him with directions to repeat the hot water in four hours, in case reaction was not complete. I also directed 10 grs. of Dover's powder, at bed time, and nourishment during the night.

On my return the next morning, I found him in quite a comfortable condition, complaining only of slight soreness along the spine, and very anxious to take nourishment, which was given at proper intervals. With the exception of some quinine in small doses, this was all that was done for him, and in a few days he was entirely restored to health.

Case II.—A young negro woman, 18 years of age, was taken with all the symptoms of pneumonia. When I was called in, she had been sick six days. She had been bled, blistered and treated according to her condition, previously to my seeing her, with evident benefit, until the afternoon of the sixth day. Hot water was thrown on the spine; she reacted at once, and was put on the use of calomel, quinine and Dover's powder, in proper proportions. It was not necessary to repeat the hot douche, and after a few days she convalesced rapidly.

I might proceed to relate many cases in proof of the efficacy of this method of treatment as an adjuvant to the remedies commonly employed in the cure of typhoid pneumonia. Nothing, in my hands, has been so effectual in re-establishing the capillary circulation as this powerful revulsive.

I do not recommend this agent as applicable in all forms of pneumonia, but would suggest its adoption in those cases in which there is a torpor in the superficial vessels, a tendency to collapse, and an urgent necessity for the production of immediate reaction. It is far preferable, in my opinion, to the slower, and far less certain action of sinapisms and blisters.

ART. IV.—*Remarks on the Treatment of Fluid Cataract.* By HENRY W. WILLIAMS, M. D., Instructor in Opthalmic Surgery in the Boylston Medical School, Boston.

GENTLEMEN: I notice in the February number of your Journal, an account of an operation for the removal of fluid cataract, by aspiration, by Dr. Desmartis, of Bordeaux.*

After the correct estimate you expressed of the slight value of this method, you may not consider the subject worthy of further notice. I venture, however, to send you a few comments on the case; which, I think, must be regarded as an instance of mistaken diagnosis, and as a blameable substitution of dangerous manœuvres for a safe and simple method.

The appearances presented by fluid cataract are so decidedly characteristic, that it seems scarcely excusable that M. Desmartis should have mistaken its nature and attempted to operate by *depression*, through the sclerotica. But allowing this error to have been committed, the chances in favour of the patient would surely have been greater had the operator contented himself with lacerating the capsule, and trusted to the absorption of the degenerated lens, than in having introduced into his eye a glass tube "scarcely larger than a cataract needle," through which, not only the fluid lens, but the previously unlacerated capsule, was to be aspirated.

I am far from regarding the operations on the eye as insusceptible of further improvement, and am delighted to notice every real advance in the adaptation of instruments to the exigencies of practice. But the instance referred to offers no such example of the ingenious application of novel means in unforeseen circumstances; it is merely a step

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*See *ante*, vol. ii, p. 399.

backward; a resort to a method long since superseded by the operation advocated and employed with so much ability by Mr. Saunders,—the laceration of the anterior capsule through the cornea.

Dr. Jacob has recently, in his work on Cataract, contributed new evidence in favour of this operation; proving that the cornea will bear simple injury with more impunity than most of the tissues of the body, and that every variety of soft cataract may be successfully operated on by means of a fine needle passed through the cornea and anterior chamber.

The risk of introducing an instrument through the delicate structures which are necessarily wounded in passing the needle through the sclerotica is thus avoided. What is true of soft or semi-soft cataract will apply with yet more force to those which have become fluid. There is here no danger of internal inflammation from the pressure of swollen fragments of lenticular substance, and, after a few hours nausea or pain, the milky contents of the capsule are often completely absorbed. If the capsule is transparent, and is sufficiently lacerated by the instrument, it usually disappears: if it be cloudy, it may be readily extracted, without making any other puncture, by means of the delicate instrument named by M. Charrière, the "*serre-tête.*"

I do not agree with you that fluid cataract is of very rare occurrence. I have operated on five cases of this description within the past two years; and, in referring to the records of all my cases, I find that ten *per cent.* of the cataracts on which I have operated, have been entirely fluid, in addition to others of very soft consistence. This, I am aware, is much more than the usual proportion; but it furnishes, in my opinion, another reason for resorting to the anterior operation in cases of cataract where the appearances indicate any softness of consistence.

ART. V.—*On the Localization of Fevers.* BY L. B. ANDERSON, M. D., of Verdon, Hanover county, Va.

In two articles published in the last volume of the *Stethoscope,* I laid down what I conceived to be the fundamental principles upon which all medical investigation must ultimately be based, in order to arrive at just and scientific conclusions. In the last of these papers, I promised to endeavour to make a practical application of those principles. I now propose to comply in part with that voluntary obligation. In doing so, however, I am aware that I shall be occupying a position antagonistic to nearly the entire profession. But a desire to strip our science of some of the mystery which has been most improperly and unnecessarily thrown around it, as well as to attract the attention of other and abler minds to this subject, is my sole apology for this adventurous step. "Though the state of our abilities and opportunities may deny us the praise of considerable progress, yet we can but hope to exhibit a laudable inclination and some degree of judgment in the choice of our road. And even should we fail of producing a clear conviction, we farther hope, that in the collision of facts, some sparks may be struck out to show a future adventurer his way."

The human system being composed of substances differing exceedingly in their composition, there must be eliminated from the digestive apparatus for its sustenance, elements of nutrition no less dissimilar. It has been ascertained by carefully conducted experiments, that a globule of blood adapted to the nutrition of bone, will not conspire to the sustenance of muscle. If from the operation of any agent, the balance of the circulation be destroyed, there would be thrown into parts differing in chemical and physical composition, globules of blood destined for the nutriment of other structures. If, therefore, one portion of the system sustain an injury sufficient to destroy this equilibrium, we should have blood circulating in capillaries supplying nutriment to muscle, which in its composition was only adapted to the production of fibrous tissue, or some other differently organized structure.

If there be no affinity between the blood and the vessel in which it circulates, it must from the known laws of the animal economy, produce excitement or depression. If it act as a stimulant, the contractility of the vessels will be augmented, both in force and frequency, and an abnormal quantity of blood would be attracted to the part, both from the demand of the structure for suitable nutritive elements, as well as a more frequent formation of a vacuum. And since the circulation had been previously deranged, and blood was circulating in parts for which it had no affinity, the quantity of such perverted particles of the circulating fluid must be greatly increased, and the stimulating impression greatly augmented, thus ultimately producing congestion or inflammation, in one or more important organs.

If the impression made, however, by such perverted constituents of the blood be of a depressing nature, the proximate or remote effect will be the same. In proportion, therefore, to the first perversion of the circulation and the impaired state of the general health at the time, will be the height and duration of the consecutive fever.

The quantity of blood circulating in the system at a given time being designated by the figure 3, and the sum of the organ to be supplied being expressed by the same numeral, it will be evident that when more blood is conveyed to one organ than it normally requires, one or both of the others will be deprived of their due quantity. And while the presence of an abnormal quantity of blood in a part presupposes the fact that it contains elements differently organized from the part in which it circulates, it also conduces to the conclusion that other organs are deprived of their normal quantity of nutritious matter, in due proportion to the aberration of the circulating fluid. Undue excitement being produced in the part to which the determination is made, by the presence of agents in the vessels for which they have no affinity, the organs deprived of those agents, will be no less unduly affected by this absence—the one overcome by an influx of blood, the other prostrated by its absence.

On the accession of such a state, the organic sensibility becomes exalted, and the enfeebled vessels are again enabled to regain their contractility; the agent which enfeebled them being thus rendered the instrument of their restoration, and a state of excitement ensues. In obedience to a well-known law "that every abnormal excitement will be followed by a corresponding period of depression," *et vice versa*, this state of re-action will be commensurate with the previous debility. And in obedience to the same law, a corresponding period of repose will ultimately ensue, thus presenting the characteristics of intermittent fever.

If however, there be no sanative change in the local affection, which gave rise to the primary excitement, when the period of quiescence should be attained, an approximation thereto is only effected. The nervous system, yet unduly excited by the local affection, brings the vascular system under its control, and a state of arterial excitement is again produced, which is perpetuated by successive re-actions of one system upon the other, and by the loss of the equilibrium of the circulation from local lesion; (independent, in a measure, of any positive agency which the nervous system may exert;) thus presenting the constitutional signs of continued fever.

The functions of the liver being deranged by exposure to those agents which generally produce such an effect, we find that the morbid impression which such aberration of function produces, is reflected more directly and sensibly back upon that organ, as a natural consequence, than on any other portion of the system. Additional agents in the production of diseases being thus generated within its own substance, must still farther pervert its own functions and prevent an elimination of such constituents of the blood as the laws of the animal economy demand.

Such deleterious agents being retained in and conveyed by the blood to other organs, would produce like aberration of functions in them, as well as greatly augment or obtund organic sensibility. If the organic sensibility be made greater, the capillary circulation would be increased, and the organic sensibility rendered much more acute, whilst, as a necessary consequence, the action of the heart and arteries would be also greatly augmented. If, however, the organic sensibility be obtunded, the circulation would be correspondingly lowered, and the power of the vessels thus deprived of their normal excitability, would be lessened in such a degree as to give rise to congestion. Whether the circulation be greatly increased in the organ, or entirely impeded, its equilibrium would, in either case, be destroyed; and all the morbid changes above mentioned would with more or less regularity ensue.

The agents which generally produce fever are those which have, directly or indirectly, an exciting or depressing effect upon the system. That effect may be either local or general.

Should it be an agent which is calculated to have a general depressing effect, that organ or portion of the system which, from previous disease, the peculiar character of the morbific agent, or the habits of the individual, is mostly debilitated, will be the first to succumb to its enervating influence. Should it be of a stimulating character, the general nervous excitement, temporarily arousing the action of the heart and arteries, would produce congestion or inflammation in that organ or portion of the system which, from its greater susceptibility to the impression, or previous aberration from a healthy condition, would be less able to sustain the equilibrium of the circulation. It can readily be perceived how the vascular system can again be excited or reduced to the same condition which primarily gave rise to such phenomena, and how, with each succeeding re-action and depression, the morbid action can be increased. We can also see how a period of quiescence can be wholly attained, and a corresponding degree of excitement ensue; or how that state can only be occasionally approximated by the increase of morbid actions in various organs, and consequently a detention of more deleterious matter in the blood. And again, the type of the fever can be modified by the peculiar condition of the atmosphere, as regards its temperature and barometrical changes, the habits of the individual, his previous occupation, or state of health.

That fever can exist without the presence of inflammation, proper, in any portion of the system, and yet not be a disease "sui generis," is, we conceive, clearly delineated by the foregoing physiological facts. Yet we are inclined to the opinion, that a vast majority of fevers incident to our climate, are produced by inflammation, in some one or more of its stages, rather than functional disorder alone; and that the characteristics by which a fever, in the common acceptation of the term, is distinguished from the arterial excitement resulting from acute pleuritis, pneumonia, or gastritis, are the result of a more gradual development of the inflammation, thereby vitiating the functions more slowly, and consequently depressing the vital energies of the system so considerably as to prevent that ardent degree of excitement which results from acute inflammatory affections.

Again, the gradual derangement of functions, which is produced by incubative inflammation, lessens the quantity or impairs the quality of the albumen, so that when the state of excitement is produced by a destruction of the equilibrium of the circulation as a natural consequence of local inflammation or aberration of function, the quantity of fibrin is lessened, instead of increased, and consequently, the fever is of a less active character, whilst the tendency to remission is greatly augmented. It is, no doubt, frequently the case that inflammation, in a considerable degree, exists in some portions of the system, giving rise to fever, and enhancing its progress, whilst its presence is not manifested by any of the ordinary signs of its existence.

In active inflammation brought on by sudden changes in the atmosphere or highly irritating substances, the functions not having been previously deranged, or the system greatly depressed or enervated, and consequently the blood not at all deteriorated, the sensibility of the inflamed organ is greatly augmented by the activity of its capillary circulation; the sensibility of the system or any of its parts being always in proportion to the activity of the circulation of healthy blood in the capillaries. But in inflammation originating from less active agents in an enervated system, and increasing *pari passu* with aberration of the functions of various organs, the activity of the capillary circulation in the inflamed part is necessarily lowered, and the sensibility consequently lessened.

Thus, when the system has been exposed to any agent which is calculated to lessen the activity of its functions, and consequently lower its vitality, the sensibility of the sensory nerves is lessened, whilst the deranged functions of the lungs and skin cause an imperfect arterialization of the blood, and consequently decreases still more the sensibility of those nerves; rendering it apparent that inflammation may exist in a part plentifully supplied with nerves of organic life, yet not exciting, in any ostensible manner, the different fibres of the sensory nerves.

This fact is yet more clearly exhibited in pathological changes which occur in typhoid fever, than in any physiological deduction of our own. Thus, we often see it the case, in the progress of that fever, that active hæmorrhages occur from the mucous membrane of the alimentary canal, and yet no indications of inflammation were exhibited previously. Such profuse discharges of blood, followed by recovery, cannot be attributed to exosmosis, without the existence of previous inflammation; nor can it be assigned to a rupture of the coats of the larger vessels, for the effusion would unquestionably prove fatal did it originate from such a source. It can, therefore, only be attributed to exosmosis from the arterial capillaries, as a result of inflammation; for no sooner are they emptied of their abnormal quantity of blood, than the hæmorrhage ceases. It is not unfrequently the case, that resolution of the inflammation is thus effected, and convalescence immediately ensues; showing conclusively, that inflammation may exist in the alimentary canal, and yet not be indicated by the existence of pain. In the progress of some cases of typhoid fever, every indication of inflammation in the alimentary canal is exhibited, whilst a "post mortem" examination reveals the existence of no such affection in any part of the system. This fact can only be satisfactorily explained on the following principle:—that from the laxity of the muscular fibre occasioned by loss of nutrition in the part, the inflamed vessels can and do, in *articulo mortis*, not only expel the abnormal quality of blood which they contain, but empty themselves entirely, as do the intestines not unfrequently under like circumstances, and thus leave no vestige of the previously existing inflammation.

From the foregoing physiological facts and pathological deductions, my mind is irresistibly drawn to the following conclusions:

1st. That fever is always a symptom of disease previously existing in the animal economy, and that all morbid changes which arise during its progress, result from functional aberration and deterioration of the blood, as a consequence of the previously existing disease, and not as a result of the febrile excitement itself.

2d. That all fevers arise from perverted functions or local inflammations, and are, consequently, one and the same in their primary organization; but ultimately vary in such a manner, from the influence of peculiar modifying circumstances, as to present every type of fever, from the most active synochus, to the lowest grade of typhus.

3d. That in the progress of fever, such agents may be generated in the animal economy by a total perversion of the vital functions, as will, when introduced into another system, produce like perversions in it, and consequently give origin to all the characteristics of a similar disease.

4th. That the indications manifested in fever, do not lead the skilful practitioner to seek such agents as will rectify the supposed virus which gave origin thereto, but rather to discover the *location of the disease*, and endeavor to remove *that*, whilst at the same time, his attention is directed to such agents as will rectify perverted functions, and prevent additional injurious consequences resulting therefrom.

5th. That there can be no such thing as a continued fever, originating from the impression of any agent upon the system, without perversion to a greater or less degree of one or more important functions. For instance, if the virus of rubiola or any other contagious disease, were to produce fever by its direct impression on the system, such febrile excitement should originate immediately on its introduction therein; so that the fact of the length of time required, from the introduction of the agent to the origin of the fever, clearly indicates that some local affection must necessarily be produced, prior to the generation of the febrile excitement; which is, unquestionably, a potent argument in favor of the *localization* of fever.

6th. That since all fevers originate from local inflammation or functional derangement, they must necessarily subside on a discussion of the inflammation, or a restoration to a healthy condition of the impaired functions, if the vitiated secretions have been previously removed which originated therefrom. It is therefore rendered apparent, from physiological facts and pathological deductions, that fever is only commensurate with the duration of the inflammation, or the functional aberration which gave origin thereto. To which important practical conclusion, my mind has long since been inducted, by much experience in the treatment of typhoid fever, an epitome of which I design preparing, at no distant day, for your Journal.

CLINICAL LECTURES.

I. *Clinical Lecture on Hooping-cough, delivered at King's College Hospital.* By Robert B. Todd, M. D., F. R. S.

There is one form of cough so peculiar and so characteristic, that it must be dealt with *per se*, constituting as it does, not alone a symptom, but in truth a disease. The hooping-cough, so called from its peculiar final whoop, which is a sign that the patient is again taking breath, is not often brought under our notice in the wards of a hospital. It is much more common among the out-patients of a hospital than among the in-patients.

Of the two examples of hooping-cough now in the hospital, one case is that of a girl, named Elizabeth Griffin, who was admitted into Lonsdale Ward, on December 21, 1852 ; the other is a brother of this patient, named John Griffin, who was brought into the hospital on the 11th instant; and both cases well illustrate the clinical history and the main points connected with the pathology of hooping-cough.

The great and all-absorbing feature of the disease is, that it is essentially "a cough;" it begins with a cough, and, until the malady is fairly worn out, this symptom continues to be present in a more or less severe form. The cough consists of a rapid succession of the most powerful expiratory efforts; so powerful, that some parts of the lungs must be as completely emptied of air by them as the mechanical arrangements of these organs will admit of. It appears probable that some lobules get quite emptied of air in this way, and thus is explained the condensation of portions of the lungs, occurring in this disease; but to this point I shall refer presently.

The violence of the cough, also, often excites vomiting, by means of which the stomach gets completely emptied of its contents, the paroxysm is stopped, and the patient experiences perfect relief for the time; if he be a child, he returns to his play, or, if seized while eating, he goes back to his food, (the appetite being generally very good, oftentimes voracious,) until, by and by, a fresh accumulation takes place in the stomach, the same train of expiratory efforts and vomiting is again gone through, and complete relief is again afforded.

There is one circumstance connected with this cough by which it differs from all other coughs, namely, that the series of expiratory efforts are so powerful, and expel the air so largely from the lungs, that there follows upon them a long protracted *inspiratory* act, which is accompanied by the well-known whooping sound, so highly characteristic of this disease. To explain the mode of formation of this peculiar and characteristic sound, let us briefly consider what the precise condition of the air passages is just at the moment of inspiration. In the forcible efforts to expel the air from the lungs by coughing, the larynx, trachea, and whole bronchial tree, are narrowed to their utmost extent, so that the inspiratory effort sometimes occupies a long time in the attempt to draw in the air, through the now constricted passages, while, above all, the glottis is closed, and a looker-on cannot but fear, that this spasmodic closure will produce the death of the patient; and sometimes, indeed, death does actually result from this cause, the closure of the glottis being quite as perfect as when an attempt is made to inhale carbonic acid. But at length the inspiratory effort succeeds, and, while it is taking place, the inward rush of the air through the narrowed and constricted fissure of the glottis produces the whooping sound which is truly pathognomonic of this disease.

Thus the whoop, which alarms the ignorant, is, to those who understand its mode of production, the signal of the child's safety, as the sound of thunder announces that the danger from the lightning-flash has passed.

There is no other symptom, besides this peculiar sound accompanying inspiration, which may be taken as certainly diagnostic of hooping-cough; and, when you are called to see a patient, supposed to be labouring under this complaint, it would not be safe to pronounce, that this is is the malady, unless you have distinct evidence of this characteristic whoop. This peculiar sound, it is true, is sometimes imitated by other coughs, but it is never anything like so well-defined, so far as my experience goes, in any other affection, as it is in this.

To be enabled to understand the pathology of hooping-cough it is necessary to have some insight into the most important points in its clinical history.

Hooping-cough affects children mainly; indeed, it may be regarded as essentially a disease of childhood. There are some affections of the laryngeal organs, chiefly spasmodic affections of the muscles of the glottis, which appear to be in a great measure peculiar to this early period of life. To these affections, among which spasmodic croup, or laryngismus stridulus, occupies a prominent place, hooping-cough bears some analogy. It generally occurs at the early periods of childhood, but it is by no means limited to these ages; indeed, of the cases now in the hospital, the one patient is ten, the other fifteen years of age. It is rarely met with in adults, and it still more rarely attacks persons in the advanced periods of life; but that it sometimes does so, may be known from the fact, that, among the most recent cases of hooping-cough which I have witnessed, it occurred in the persons of an old married couple, aged eighty and seventy-two years respectively, and they got safely through this trying malady.

Another feature in the clinical history of hooping-cough is, that it is a contagious disease. This is exemplified by the cases now in the hospital, one of which I will briefly read to you:—"Elizabeth Griffin, aged 15, admitted Dec. 21, 1852. She has always had very good health, and was never laid up until her present illness, which commenced six weeks previous to her admission, when her brother caught the hooping-cough at school, and came home with it; immediately after this she was seized with hooping-cough, and has it severely." Now, this is the general history which we continually hear in cases of this complaint. One member of a family gets the disease, and it then spreads through the whole household, just like other contagious diseases, as measles, scarlatina, etc.

Hooping-cough has certain stages, which it is necessary we should describe more at length.

In the first stage, the symptoms are febrile and catarrhal, and the disease often passes for an ordinary cold. This state continues for ten or twelve days, and is then succeeded by the cough, the peculiar feature of which is, that it occurs in paroxysms, lasting some time, and following each other at variable intervals, and constituting the second stage of the disease; but, during the intervals between the paroxysms, the patient feels quite well, and one would hardly imagine there was anything the matter with him, except in the advanced periods of the complaint. The complete remission, which takes place, in many cases, between the paroxysms, is not the least curious feature of the disease. A minute or two after a violent fit of coughing, which you would imagine seriously jeopardised his life, you will see the child resume his play as merrily as if nothing had happened, and so he will go on.

The third stage varies considerably in different cases; the patient may either gradually recover, the symptoms becoming less and less marked, or certain changes may take place in the lungs and circulating system, which may lead to a fatal termination.

Let me direct your attention to these secondary changes, which occur in the lungs and vascular system, after the disease has lasted for some time. At first, the lungs are not at all affected; so that hooping-cough can no more be considered a disease of these organs, than can an aneurismal or other tumour pressing upon the vagus nerve, and, in this manner, exciting cough, be so regarded. After the cough has continued a long while, however, changes take place, as I just now stated, affecting the lungs and the general appearance of the patient. The countenance becomes full and bloated, and the capillaries distended, especially those of the conjunctivæ, which look watery and swollen; and some of these minute vessels often burst, giving rise to some chemosis. From this state of countenance, a practical eye can generally at once recognise the nature of the malady, under which the patient labours.

All these changes result from the circulation in the capillaries being retarded, in consequence of the violence of the cough. At the same time, and for a like reason, the pulmonary circulation becomes similarly affected; the secretion of the bronchial tubes becomes altered; these tubes pour forth more freely than natural a watery mucus; the lungs become congested and œdematous; more or less crepitation is heard in different parts of these organs, according to the amount of fluid in the tubes or œdema present; and this crepitation is usually most audible towards the lower part, being sometimes more distinct in one lung than in the other. Both the patients in the hospital exhibit these changes to a considerable extent. The sound on percussion over the base of the lungs is duller than natural; and this arises mainly from the œdematous state of these organs, but in part, also, from the quantity of mucus present in the bronchial tubes, and from the expiratory efforts having emptied some lobules of air more completely than others, (some lobules being, perhaps, perfectly emptied in this manner, and consequently, quite collapsed); and, lastly, from the altered bronchial secretion plugging up the entrance to one or more lobules, and in this way preventing the free ingress of air. This condition of lung, in which the ingress of air to certain portions is prevented, and of which certain other portions have also been completely emptied of the contained air, has been long known to pathologists under the name of "carnification." A carnified lung has a fleshy look, does not crepitate under pressure, and sinks in water; and this condition may be induced by anything which causes the complete expulsion of the air out of the lung, or which entirely prevents the ingress of air into a lung previously devoid of air, as one which has never respired; and it is best seen in the lung of a fœtus which has never breathed. The most common cause of it, and that which, perhaps, developes it most completely, is the accumulation of fluid in the pleural cavity, by the pressure which it exerts on the adjacent lung. Carnification of the lung is carefully to be distinguished from hepatization. The former has nothing to do with inflammation, but merely consists in a condensation of the original pulmonary structure; the latter results from the effusion or exudation of an albumino-fibrinous material into the air-cells and finest bronchial tubes, by which the organ is rendered specifically heavier.

It was formerly supposed, that lobular pneumonia took place in hooping-cough. That pneumonia, just as bronchitis, may occur in the course of hooping-cough is certain; but the signs which used to be considered as produced by lobular inflammation, are, in reality, due to the simple exclusion of air from one or more lobules.

In the third stage of hooping-cough, if the case goes on favourably, there is a gradual abatement of the cough; the paroxysms become fewer and less severe, and the patient gradually returns to his normal state of health. But if, on the other hand, the progress is unfavourable, the symptoms become aggravated, the paroxysms more frequent, the bronchial tubes enlarged, the secretion of their relaxed mucous membrane increased, and, at length, the patient dies completely worn out and exhausted. If tubercles previously existed in the lungs in a quiescent condition, they are thrown into a state of activity, and symptoms of phthisis manifest themselves. Convulsions and coma, also, frequently accompany hooping-cough, especially in ill-nourished, badly-fed children, as the disease approaches its fatal termination. In these subjects, too, hooping-cough sometimes becomes complicated with an effusion of fluid into the lateral ventricles of the brain, and the phenomena of hydrocephalus are developed.

Causes.—In entering into the consideration of the causes of hooping cough, one of the first questions that suggests itself is, whether the malady has its seat in the lungs. That hooping-cough is clearly no disease of the lungs, is shown both by its clinical history, and by the fact, that auscultation can detect nothing abnormal in the voice or breath-sounds of a patient in the earlier stages of the complaint.

Its cause does not depend upon any peculiar state of the larynx or trachea; for there is no permanent affection of the voice, nor of the laryngeal muscles, nor of the glottis; nor are the symptoms such as diseases of the larynx or trachea usually give rise to.

Does the disease depend upon any morbid condition of the broncial glands? The bronchial glands are often considerably enlarged without such a cough as the peculiar, paroxysmal one of this disease. Nor would the patient enjoy the complete freedom from distress which so often exists between the paroxysms of cough.

Having, then, set aside all these so-called causes of hooping-cough, the only supposition now left us as to the true cause of the disease is, that it depends upon some peculiar irritation of the vagus itself. In fact, hooping-cough is a special disease of this nerve, the irritation being quite as complete as when the exposed nerve is mechanically stimulated. But the cough differs from that which is produced by mechanical irritation of the nerve, in its coming on in paroxysms at longer or shorter intervals from each other, the patient's health during the intervals being very good. This paroxysmal character of the disease, with the complete state of health in the intervals, except when the constitution or the lungs have become damaged by the effects of the cough, associates hooping-cough with other diseases, the peculiar phenomena of which depend upon some poison in the blood, manifesting its presence by the specific action, which it exercises upon some particular tissue, and by the interference, which it seems to offer to the due performance of healthy function. For certain poisons undoubtedly appear to have a peculiar affinity for certain tissues; thus the poison of measles appears to have a special affinity for the mucous membrane of the bronchial tubes and bowels, that of scarlatina for the throat, and so on of the other acute specific diseases. In like manner the poison, which gives rise to the phenomena of hooping-cough, seems to have a peculiar affinity for the vagus nerve; but whether throughout the whole course of that nerve, at its centre or its periphery, it is impossible, in the present state of our knowledge, to affirm with any degree of accuracy. It is no valid objection to this view of the nature of the disease, to say, that after death, no structural alteration of the vagus can be distinguished, although Autenreith and others state, that in cases of hooping-cough examined after death, they have found the vagus in a congested condition. But congestion is much more frequently the effect, than the cause of a disease; and it may be especially so in this case. In many nervous affections, as for instance in those distressing cases of neuralgia, in which the most intense pain has existed during life, no appreciable morbid condition of the nerves supposed to be the seat of the pain can be detected on the most careful examination after death. The poison in hooping-cough, whatever it be, produces no structural lesion in the nerves, and leaves nothing behind it, of which our senses can take cognizance.

Hooping-cough, then, as far as present knowledge enables us to speak, is a disease which runs a certain course, can be communicated from one person to another, and is probably due to the influence of a poison which gets into the system, and produces its local manifestations on the vagus nerve. It is not an inflammatory affection of any part, being simply dependent on a morbid state of the blood, caused by the introduction into it of some poison from without; and whatever inflammations may occur in the course of it must be regarded in the light of complications of the disease.

Having advanced this view of the nature of the disease, let me make a few observations upon its rational treatment, as founded upon these opinions.

Assuming hooping-cough to be a disease, depending on the presence of a morbid poison in the blood, (which is the most reasonable view of its pathology,) to cure the affection perfectly, we ought to find an antidote for the poison, which produces it. If we could find some material which, when introduced into the system after it had received the poison, would neutralise that poison, then we should have the same power over the malady, as we now possess over intermittent fever, which, as you know, is also a paroxysmal disease, depending on the presence of some morbid poison in the system, and for which an antidote has been found in bark. But since, unfortunately, no antidote for hooping-cough has as yet been discovered, it should not be our practice to look on in silence, and let the patient cough it out; but our aim should be to find the means of guarding him against the bad consequences of the cough, and to protect him from all those complications, to which I referred at the commencement of the lecture.

As the disease does not consist in an inflammatory condition of any part, we may at once dismiss all so-called antiphlogistic plans of treatment. That plan indeed, has had a fair trial; and if it had any real power over the disease, we should have, long ere this, accumulated abundant evidence to prove its superiority. The tendency of all the usual antiphlogistic measures is to weaken the nutrition of the lungs and the nervous system, and to impoverish the blood; to reduce the quantity of its colouring-matter, to favour the accession of convulsions, and by the watery parts of the blood filtering through the walls of the blood-vessels, to promote the tendency to hydrocephalus.

The first point in the treatment is, carefully to guard the patient against the occurrence of bronchitis and pneumonia, as complications of the disease. Now, there is nothing which is so fertile a cause of bronchitis, as the admission of cold air to the bronchial mucous membrane. Consequently, the patient should be kept in a well-regulated temperature; if his illness occur in the winter, he should stay in-doors, in a roomy, well ventilated apartment, which is not too warm but of a uniform heat. He should be kept in this apartment, and not allowed to run about the house into rooms, or upon lobbies or staircases, which must present great variety of temperature. Early and close attention to this maintenance of a uniform temperature of the atmosphere in which the child resides, may save much subsequent mischief.

The second point is to uphold the general nutrition—to keep the patient well nourished. I do not mean, that the patient should be crammed or over-fed, but that his diet should be well regulated, and sufficient food of all kinds supplied, not only to satisfy the appetite, but also—and what is far more important—the real wants of the system. On this account, I object to keep children in this disease without animal food, as some so much insist on, though why they do so I cannot tell; for meat in regulated quantities, and properly masticated, is more easily digested than almost anything else; and it differs from other alimentary substances, in the fact that its digestion consists in a simple process of solution in the stomach.

Another practice which exercises a most favourable influence on the nervous system, (and it is this that we must look to after all,) is sponging the chest with *cold water* once or twice a day. The parents of weakly, delicate children often object to this plan of treatment; but by ordering a little spirit to be mixed with the water, you not only may overcome their scruples, but in giving a stimulating quality to the application increase its efficacy. This sponging of the back and front of the chest, night and morning, exercises a bracing and tonic influence on the nerves, and in this way often acts very beneficially in this disease. Spirituous embrocations often do good in a similar manner.

In a large number of cases, one can get on very well without having recourse to drugs. Those which you will find most useful, and which I would recommend to your notice, are sedative and antispasmodic remedies, in virtue of the power which they possess in allaying irritability of the nervous system generally, such as the various preparations of opium, henbane, conium, belladonna, and hydrocyanic acid. The non-nauseating expectorants, such as chloric ether, ammonia, and perhaps senega, may be also used; and astringents, to check excessive bronchial secretion, such as alum, sulphate of zinc, tannic and gallic acids, are sometimes necessary. But you must bear in mind, that such remedies should be used with caution, especially opiates, which in infancy and childhood are at all times to be given with great care, and more particularly if the lungs have become congested. The drugs which I would recommend you to avoid, are those which have a depressing and lowering tendency, such as tartar emetic and ipecacuanha. Many children, I am quite satisfied, while suffering from hooping-cough, have died from the too free and slovenly exhibition of these emetics.

If I had an opportunity of treating hooping-cough on the large scale, I would, in cases in which the paroxysms are very frequent and very severe, and when, as yet, the lungs are free from congestion, but not otherwise, give a fair trial to the careful inhalation of chloroform, with the view of endeavouring to cut short the paroxysm. We know that we can arrest the paroxysm of asthma in this way; why, then, should we not be able to do the same with that of hooping-cough? I have also known laryngismus stridulus relieved by the use of chloroform; and it is now well proved that other convulsions of children may be checked by its means.

In the cases of delicate children, where there is great reason to fear that damage may be done to the lungs by the cough, this practice may prove very useful. But, with reference to the administration of chloroform, this fact should always be borne in mind, and it cannot be too frequently reiterated, that due provision should be made for the simultaneous free admission of air, along with the vapour of chloroform. There is no point upon which some men seem to be more foolhardy than on this one; and it is by the neglect of attending to this, that the reputation of one of the most valuable remedies that has ever been applied to the relief human suffering may be seriously damaged. I do not advise you to give chloroform, so as to produce its full effect; it may be inhaled in small doses of ten or fifteen minims, which may be repeated at intervals, according to the severity of the paroxysms. When children are already in an exhausted and very depressed state, chloroform ought not to be administed by inhalation, or it should be given only in the smallest quantities.

Another remedy in the treatment of hooping-cough, to which I should very much like to give a fair trial, is the application of cold water, on the splashing plan, two or three times daily, with or without the inhalation of chloroform. Such a practice must be pursued with proper precautions; first, to maintain a warm temperature of the room in which it is done; and, secondly, to have the water thrown over the child rapidly, and not so as to wet the head. To let the back and chest receive the brunt of the splash. These measures combined, would tend to diminish the severity of the paroxysms, ward off the occurrence of bronchitis and pneumonia, as complications of the disease, promote the general nutrition, stimulate the nervous system, and thus protect the patient from the damaging effects of the cough.*

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* This Lecture was given in January, 1853. A paper appeared in the *Edinburg Monthly Journal* for August 1853, (which I have only seen as quoted in "Ranking's Abstract" for December, 1853,) in which Dr. Fleetwood Churchill gives the weight of his high authority to the trial of chloroform, and relates cases in which it has been employed with excellent result. I am sure, that the more hooping-cough is treated as a *spasmodic* rather than an *inflammatory* affection, the greater will be the success of our practice and the less the mortality from that disease. Three children were admitted into the hospital in the early part of the present winter, with this disease in an advanced stage, and in a very much depressed state, with the lungs much congested, and a copious bronchial secretion. The general plan of treatment recommended in the lecture was carried out with good effect; and, in one of the cases, the chloroform inhalation had a manifest influence in diminishing the number and violence of the paroxysms. In one, it seemed to depress; and in the third it produced no marked effect, beyond that of tranquillising the child for a short time.

II. *On the Treatment of Hysteria.* By M. Gendrin.

The observation of hysterical diseases teaches us that by placing patients in appropriate hygienic conditions and leaving the malady to itself, it will disappear spontaneously as age advances; so that an expectant treatment will ultimately result in recovery. The physician who expects a speedy cure will be disappointed by a disease essentially chronic in its nature and progress.

The practitioner will sometimes be *forced* to adopt the expectant plan, and he should then carefully remove everything which can exasperate the disease, especially such causes as excite the nervous system. If the hysterical woman is unhappy in her domestic relations; if she is surrounded by those who, not understanding her character, expose her to frequent vexations, she should travel, she should be separated from all that can cause disturbances in her organization; this is the main hygienic treatment. With moral and physical repose; a life rendered happy by all kinds of enjoyments, the disease will finish of itself, by passing rapidly through all its phases.

There are, however, methods of treatment and even pharmaceutical preparations which modify the nervous system favourably, and cure hysteria. Authors who have discussed these, have dwelt too much upon remedies appropriate in the paroxysms of the disease. An immense number of remedies have been lauded one after the other, and all of them are sufficiently inert; it is evident that the affection itself is not arrested by these means.

Nevertheless, the treatment of prolonged paroxysms of hysteria is not to be neglected. It consists chiefly in the employment of means which may influence the inertia of the nervous system. By plunging the patient suddenly into cold water, or by employing extensively cold effusion, we may procure a suspension of the clonic spasms, and a cessation of the attack; but if this plan is practiced timidly, it will not be a sufficient sedative, and far from calming, it will exasperate the symptoms. If a glass of water is dashed in the face of a woman labouring under an attack of hysteria, as is so often done, it may indeed cause a termination of the attack in some cases, but in the majority it will exasperate all the symptoms. It is necessary, in order to obtain a result, to paralyse the nervous system by the rapid abstrac- of caloric.

External topical remedies are quite ineffectual; the use of sinapisms, for example, especially in the ecstatic form, constitutes an old woman's treatment which is perfectly useless. They will tell you—"She was so ill that she perceived nothing, and sinapisms were applied so long that they occasioned eschars;" this is not in the least astonishing, when you recollect to what extent anæsthesia exists in these subjects, even in regard to odours.

There are some, however, susceptible of the impressions of those fœtid substances, which frequently occasion vomiting and lypothymia even in healthy individuals. In those hysterical patients who preserve the sensibility of the pituitary membrane, we employ these fœtid odours to hasten the termination of their attacks; the odours of assafœtida, tincture of castoreum, ether, acetic acid and ammonia, burnt horn and feathers, seem to exercise a happy influence over hysterical attacks, and to favour their cessation.

In many cases the paroxysm is arrested by discovering a portion of the body in which insensibility does not exist, through which the internal organs may be stimulated. If the stomach is swollen, as occurs when the patient has swallowed large quantities of air, the attack may be cut short by strongly compressing this viscus. The majority of hysterical women preserve the sensibility of vision. During the paroxysms the eye-lids are convulsively closed; the light incommodes the patient. If the lids be forcibly separated, and a bright ray of light be directed upon the eye, the retina will sometimes be so excited as to cause the termination of the attack. At other times this will cause pain and will augment the violence of the spasms. It is a plan worth trying. The same remedies give the same results in the ecstatic form. It is requisite, however, to study the action of these agents on different patients. I have spoken of a lady who recovered from her attacks with the rapidity of the electric spark, under the influence of the feeblest odours; in others some particular odorous substance is required, acetic acid, for example, and with others all may fail.

Some women in hysteria are susceptible of the liveliest emotions upon hearing certain musical notes, upon listening to an air which they admire from some cause or another, while other tunes make no impression upon them. They are aroused by certain voices and not by others; we should therefore avail ourselves of these special means, to induce the termination of their attacks.

It is therefore necessary to investigate carefully the modes by which the nervous system may be rendered susceptible of impressions, in treating the attacks of clonic and ecstatic hysteria. But this treatment of the attacks does not affect the disease itself; it is an indirect medication only; we must search for therapeutical agents which will influence the pathological state of the nervous system; we must look for curative agents.

Remedies exist which diminish nervous irritability, and interrupt the abnormal manner in which the nervous functions are performed in this disease. Opium, mentioned by Galen as a powerful agent in lessening the aptitude to convulsions, deadens the sensibility of organs whose sensitive functions are normally performed. It loses its narcotic virtues in those subjects whose nervous functions are abnormal. These subjects often acquire the faculty of undergoing the narcotic influence of opium without stupefaction, or else, if hyperæsthesia of the digestive organs exists, which is often the case, it causes vomiting, even in the smallest doses. Opium, therefore, either exaggerates the sensibility of the digestive canal, in hysterical persons, or else it is readily supported and its influence is lost, unless it is given in very large doses. Intolerance of this remedy, however, is only observed in a few patients, while insusceptibility to its effects is observed in the majority.

Hysteria is not the only disease in which opium may be given without producing a stupefying effect. Thus, in tetanus, excessive doses of this drug may be administered without the slightest result, or else immediate effects upon the digestive canal are produced, without secondary effects, that is without narcotism.

One hysterical person experiences the immediate and exaggerated effect of opium; another vomits at the dose of a quarter of a grain; and we see others again on whom large doses produce no effect; hence the necessity, when we undertake to destroy the mobility of the nervous system, to proceed by degrees towards that point where the patient is sensible to the therapeutic influence of the medicine, and to stop short of its exaggerated action. Thus, in such a case it will be necessary to administer the opium *gradatim* up to the point where the system feels its influence. One or two grains may be commenced with, and the dose gradually increased. In the case of the woman occupying No. 2 *Salle de Rosaire*, there was an exacerbation of the disease every time she was changed to a different ward, and we gave 34 grains of opium without obtaining any obvious signs of narcotism; nevertheless she was considerably nauseated, proving that the medicine acted directly upon the stomach, and I have already reminded you that it was at this point that sensibility returned to the skin of the face. With some patients, it is not necessary to go so far to obtain the same result. Thus, in the case of the woman occupying No. 23 in the same ward, we observed the narcotic effects after six grains had been given. But in this case, we were obliged to stop the medicine on account of manifest symptoms of typhus.

In the case of hysterical patients who bear opium badly even in the most feeble doses, incorrigible vomitings and violent cardialgic pains are induced, no matter in what manner it be taken internally, or even though it be applied endermically. I have seen a quarter of a grain of opium applied upon a vesication induce vomiting. With these patients, narcotism cannot be induced, and the medicine is not applicable; but in most cases the opium acts by properly varying the dose, and the sedative effect may be observed as soon as nausea begins.

Experience will teach you that by this modification of the treatment, which ought, in most cases, be continued a long time, with many hysterical patients you will lessen by degrees the exaggerated mobility of the nervous system, reëstablish the equilibrium between the perception of sensitive impressions and the cause producing them; and when the sensibility is once reëstablished, the attacks will disappear; often indeed, they disappear before the restoration of the sensibility. This is the conception we have of the effect of narcotics in relieving the nervous system of abnormal irritability, and of their utility in this affection.

In cases where opium is badly borne, it may be made more tolerable by combination with ether, which has the effect of combatting the narcotism caused by the medicine. Ether is a diffusible stimulant, but sedative upon the nervous system, and acts by calming the convulsive movements which throw the patients into a sort of torpor. It also excites the circulation and intellectual faculties. We believe that the ether will only act in large doses. It is generally given, like musk, in feeble doses, say from 10 to 40 drops, which is equivalent to not giving it at all. The volatility of the ether is favoured by the warmth of the apartment and the evaporation which takes place in the mouth and stomach while it is being swallowed, so that the small amount which reaches the stomach is entirely inert. But in giving this medicine in large doses, you have a marked sedation, not only in hysteria, but in patients whose nervous systems are easily moved. We never give less than two drachms and a half at first, and sometimes carry it to four or five drachms. It must be given in a large quantity of cold water, for, not being soluble in water, its volatilization is avoided, and more marked effects obtained. Its action as a diffusible stimulant is transient, is soon dissipated by the respiratory organs and the effect ceases. To obtain a real effect from the ether, it must be given (in large quantities of water) from ten to twenty times a day.

We have alluded to an exaggerated sensibility, a sort of hyperæsthesia of the digestive organs in hysterical subjects, giving rise to cardialgic pains and cramps of the stomach after the ingestion of food or of medicinal substances. It will be necessary to remove this exaggerated susceptibility of the digestive organs in order to render them sufficiently tolerant of medicines so as to effect a cure. The use of the subnitrate of bismuth furnishes this means, which has the effect of allaying this irritability, and may be given as an adjuvant; thus obviating the pains which of themselves frequently cause a convulsive attack. But, to obtain these results, it is necessary to give this medicine in certain quantities. Many, and especially the disciples of Reil, recommend it in very large doses. Generally, it is sufficient to give from twenty to thirty grains, in which dose it exercises an incontestable sedative effect, diminishing the irritability of the stomach, and permitting the patient to retain the opium and the food. The pain complained of in the digestive organs modifies the gastric and hepatic secretions, and frequently instead of cardialgic pains we have a veritable dyspepsia. The patient suffers from sour eructations, acrid deposits around the teeth, constipation, inability to take acid substances, etc., etc.; leaving the stomach in such a condition that it can neither bear food or medicine; the derangement producing such an influence upon the nervous system that it is frequently the cause of hysterical attacks. The alkaline remedies to some extent relieve these conditions.

We have not spoken of all the medicines by which, in stupefying the nervous system, hysterical attacks may be prevented. Opium and ether only have been alluded to, but there are others which may be used, though required in very large quantities. Thus, castoreum has been favourably regarded by many; but, like the ether, to produce any effect, it must be given, not in the small doses usually spoken of, which are useless, but to the amount of thirty or forty grains. We prefer it in substance to tincture, as all of its properties are not soluble in alcohol.

Assafœtida has been recommended for the same purpose. Apart from the sedative action of its fœtid odour, and its purgative effect, we believe it has little power. Being very insoluble, when given in the form of pill, there is great danger of its passing off by the bowels, without being dissolved. Used in the form of injection, it acts as a purgative, but its antispasmodic action is not very evident. It is useless to pass in review all the medicines recommended in hysteria. All the stupefiants, in acting directly upon the nervous system, may lessen the manifestations and cure hysteria gradually: thus orange leaves, valerian, linden, etc., etc., which act upon the nervous system in a direct manner by means of their odorous principle, but which never effect, like opium, a direct cure.

We are obliged to resort to empiricism in order to explain the action of these remedies, for it is only experience that teaches us to appreciate their effects. Experience teaches us that opium is a powerful anti-spasmodic; it acts in a preëminent degree upon the intellectual faculties, and has no influence upon the organs of sense like the odoriferous substances, to incommode patients and provoke hysterical attacks. But while there is intestinal anæsthesia, there is no action on the part of opium: it may then be given in large doses without producing any effect upon the digestive tube or upon the circulation, and in such cases, notwithstanding its powerful anti-spasmodic attributes, it has no influence over hysteria.

To pretend to cure hysteria by medicine without regulating the regime is futile. It is necessary to subject the patients to a long course of hygiene, which lessens the sensibility of the nervous system by regulating its movements. It is necessary to enquire into the irregular habits of patients and remedy them; to regulate their sleep, and adjust their occupations properly, for often they turn day into night, and vice versa. There are subjects who use themselves to excitement of the organs of sense, such as inhaling strong odours, inordinate passion for music, living in the midst of high excitation, etc., etc. All these habits retard a cure by the excitement which they keep up in the nervous system. Masturbation, which is very common with hysterical subjects, prevents a cure. It is the same with light garments—some pinch their feet like the Chinese, while others delight in tight corsets. These are vicious habits, as they modify the nervous system and protract the cure. Those who are too sedentary must be made to take exercise in the open air, as a curative means. In directing the nervous influence upon the locomotion the perception of sensitive impressions is prevented, thus avoiding superexcitation of the nervous system, which brings on attacks of hysteria.

In conclusion, a regular hygiene, avoiding the influence of external stimulants, the use of sedatives applied to the periphery of the body, by means of the cold bath conveniently prolonged, constitutes the best medication for hysteria. Add to this opium in large doses, adjusted according to the susceptibility of the patients; subnitrate of bismuth to regulate the irritability of the stomach, and cause it to support the necessary medicine and nourishment; the proper absorbent alkalies for dyspeptic conditions; and the martial preparations when there is chlorosis.

In applying this medication to hysteria a number of cases may be frequently cured. Nevertheless, it is a disease essentially chronic, as we have said, and will often require a chronic treatment. One, two, or sometimes more years may be necessary, but by perseverence an amelioration will certainly be effected. Such is the result obtained unless there should be complication with epilepsy; then the prognosis is very different.—*Gazette des Hôpitaux.*

III. *Lectures on Fever.* By William Stokes, M. D., *Regius Professor of Physic in the University of Dublin.*

Lecture I.

It has long been my wish to deliver in this hospital a course of clinical lectures on fever. There are many reasons, as we shall presently see, why a course of this kind will be of value to you; and this institution is particularly well adapted for this branch of study, in consequence of our having fever wards attached to the general hospital. Among the many circumstances which render Dublin, in my opinion, one of the most advantageous places for medical and surgical study, is this, that here we have fever wards in connexion with some of the medical and surgical hospitals. I do not know, except in Edinburgh, of the existence of a similar arrangement.

Although, in the ordinary course of our clinical lectures, we have repeatedly had occasion to refer to fever, I have never before attempted giving a distinct course upon the subject, my reason for which was, that I did not feel myself competent to do so. But now, after a close attention to the fever wards of this hospital since the year 1827, I think that I have sufficiently matured my opinions on the subject of fever, to justify me in venturing to teach to a medical class the outlines of our knowledge on this subject.

In contrasting the opinions which I now hold on the subject of fever with those which I ventured to deliver when I was a much younger man, and engaged in lecturing on the practice of medicine in the school of Park-street, I find that there is considerable difference between my present opinions—which have been gradually and, as it were, imperceptibly forming and growing—and those which I entertained so long ago. This proves the great necessity of not venturing to teach such important subjects as the nature and treatment of fever, until our judgment has been matured by a long and practical experience.

I am particularly anxious to draw the attention of the surgical student to this branch of medicine; for when we consider the enormous extent to which fever prevails over the world, and also that it is in itself a special study, we cannot help believing that the surgical student who has not learned fever, no matter how ably he may have been educated in surgery, and in the history of idiopathic diseases, has really but half learned his business. The surgical student who has not been taught fever, is in this position: the doctrine of the universality, or of the extraordinary importance, whichever you will, of inflammation, has been impressed on his mind in every way in which it could be impressed; the ordinary practice, in the commencement of a course of surgery, being to occupy the student for many weeks with the history of inflammation. Inflammation is thus placed in the foremost rank: it is the first and great thing to which his attention is directed, and naturally, to the young mind, it appears that it is the key to all medical and all surgical knowledge. It is further impressed upon his mind by the surgical works that he reads—not merely the practical works on surgery, but the systematic works; and it is still more impressed upon him by the kind of experience which he gets during a considerable part of his studies. That experience, is experience obtained in a surgical ward, in a surgical hospital; and it is very natural, indeed, that, under these circumstances, he shall believe in the universality and importance of inflammation. He sees in a surgical ward acute ophthalmia; he sees the effects of an injury; he sees the process of reparation of a wound; he sees the process of cicatrization, and he sees little else; and having gone through his medical studies, he finds himself in this position, that he knows nothing but inflammation. In fact he has been taught only inflammation, he has seen little else but inflammation, and he *believes* in little else than inflammation. A great many students are educated in this way, and they go forth to the world ignorant of two facts in practical medicine and surgery, the importance of which cannot be overrated. The first is, the existence of an enormous number of acute and dangerous diseases which are not inflammatory,—of diseases, as I said before, which are acute, which are dangerous, and still further, which are febrile. The idea has never been impressed on the mind of the student, that there may be a local disease, an acute disease, a febrile disease, a most dangerous disease, and that that disease shall be not only not inflammation, but something the very opposite of inflammation. When we consider that it is in the various forms of fever that these conditions are met with, and when we recollect the enormous extent to which fever prevails over the world, we are justified in declaring, that when we compare the inflammatory local diseases with the non-inflammatory local diseases, the former fall immeasurably short of the latter in number and importance. The other great fact, putting aside what I have now said with respect to the existence of this large class of diseases which are not only not inflammatory, but something the opposite of inflammation, is, that the student has not learned the danger of exclusive antiphlogistic treatment as a rule in the management of ordinary idiopathic inflammation. In consequence of not having to deal with those local diseases which require, not the lancet, not starvation, but, on the contrary, tonics and wine, he has never become accustomed to the use of stimulants and tonics, and hence, in the management even of the ordinary inflammatory diseases, he is timid in the use of those measures, and he is too often rash in the adoption of the common rule of antiphlogistic treatment.

If we consider the origin of the doctrine which has so long prevailed in our schools of surgery and of medicine, though not to so great a degree in the schools of medicine as in those of surgery, that inflammation is the cause of so many diseases; and when we look back on the causes of the general adoption—the blind adoption, I may say—of the antiphlogistic treatment, we find that these unfortunate conditions of opinion sprang from many sources. Among the chief of these causes was the superaddition of the inflammatory doctrine to that of solidism, so that the ruling dogma of the day was the doctrine of solidism *plus* the doctrine of inflammation.

In order to get a clearer notion of this matter, let us go a little back. Before pathological anatomy became a science, it was held that a large number of diseases depended on alterations of the fluids. But when anatomy was directed to the investigation of disease, medical opinion rapidly underwent a change, and solidism succeeded to humoralism. Disease was then an alteration of the solids, the living tissues of the body. Now, I wish to impress strongly upon you, that solidism, as it was then presented, soon came to mean more than its original name would imply.

For the same mode of investigation which established the frequency and variety of alterations of the solids, showed that in a large number of cases a common character prevailed, which was recognised as the result of an inflammatory action. Thus, in the early, I might even say the middle periods of pathological anatomy, solidism implied not only that disease was an alteration of structure, but that that alteration was of inflammatory origin. This paved the way for the introduction of the so-called physiological doctrine, which referred all diseases to alterations of vitality, not general as affecting the whole system, but local, not differing by any special characters, but in degree only. A disease was then either a *plus* or a *minus* vitality in the affected organ, and its symptoms were explained by the sympathies of that organ; but, as so many diseases were attended with vascularity, deposition, and increased sensibility, it was inferred that the vast majority of local affections, indeed all important diseases, were examples of an augmented vitality in the part. This doctrine spread rapidly, and there were many reasons why it should do so. It was specious, simple, and had for its founder a man of extraordinary energy and eloquence. In this world any doctrine that has an energetic and eloquent apostle will not want for converts, and Broussais was a man of great talent, experience and practical knowledge. He was, however, deficient in reasoning power, and, in my opinion, he was also a very imperfect pathological anatomist. The doctrine became popular from the facility which it promised in the treatment of disease; for as the great majority of diseases were symptomatic of the *plus* vitality of some organ, we had only to discover the part in which this excessive life was seated, and to remove it, of course, by an antiphlogistic treatment.

When the investigations of this pathological anatomist and his followers were directed to the examination of fever cases, it was found, on the continent more especially, that local disease frequently existed in the gastro-intestinal tube. At once, then, the doctrine followed, that fever formed no exception to the rule; that it was symptomatic of a *plus* vitality of the gastro-intestinal tube; and you were led to believe that fever could be at once cured by leeching, by starvation, by poultices to the belly, and such means.

It is curious, that there are some circumstances connected with fever which greatly tended to prop up this doctrine. We shall see, by and by, that an essential condition of fever is periodicity; that it is a disease which has a tendency to spontaneous termination at a given time. It is like a paroxysm of ague, only prolonged, as it were,—this will give you the best idea of fever. This mysterious law of periodicity implies, that the system has a power of curing itself, that is to say, that the diseased action will spontaneously subside. This is termed crisis. Now, it is found, that there are a variety of circumstances which interfere with the operation of this extraordinary law of spontaneous cure. One of these is the existence of a local irritation in any part of the system.

We see this remarkably exemplified in cases of ague. You will very often find, that in cases of intermitting fever, the treatment by bark will not succeed; and when you come to inquire what is the cause of this, you find that there is some local inflammation present. If you can remove that local inflammation, then the treatment by bark succeeds. Broussais appealed strongly to the following fact: that in cases of fever, after free depletion of the abdomen, the patients speedily recovered. So they did; but the nature of the fact was misinterpreted. Those patients had a local secondary disease in the intestine, which interfered with, or prevented, the operation of the law of periodicity. When you modified or removed that local disease, the law of periodicity came again into action, and the patient recovered. The fever did not subside because it was symptomatic of a disease of the intestine; but it subsided because the disease of the intestine being removed or modified, it was reduced to its normal state, as it were; to its state of simplicity, and then the law of periodicity was enabled to act. This doctrine was received extensively on the continent, extensively in America, and in England and Ireland, but not so extensively in the schools of the two latter countries. There was a much greater reluctance to the reception of the physiological doctrine in this country and in England than on the continent, or in America, and this is highly creditable to the British and Irish medical mind. Many reasons might be adduced to explain why this was so, but we shall not enter at length into them. I may, however, observe, that English medicine had received a great degree of excellence from the writings of the old masters in England, from the writings of Fothergill, Sydenham, Haygarth, and other men of that order. Those great medical observers had, unknowingly, taught the true medical philosophy. They had taught a rational eclecticism, and hence they implanted in the minds of British medical investigators, great reserve and great caution in the reception of new doctrines. Still, however, upon the younger members of the profession the doctrine had a wonderful influence. A large number of the junior members of the medical and surgical profession in this country, during the last quarter of a century, or perhaps the last half century, were strongly imbued with this doctrine, and went forth to practise over the world, influenced by this theory of inflammation being the sole cause of diseases, and believing that the whole practice of medicine was reduced to the removal of local inflammation. Another cause, however, I cannot help noticing here. About this time, owing to the unhappy and calamitous division of the profession into medicine and surgery, arose those corporate distinctions that have done so much to retard the progress of science in these countries; exclusive schools of surgery sprang up, and consequently, as I observed at the commencement, a large and increasing number of young men were educated without having ever seen a case of fever. They were educated in surgery; they were educated in a surgical ward, and were sent forth naturally advocates of inflammation, because they had seen nothing else. They had seen nothing but inflammation; they had been taught nothing but inflammation; they knew nothing but inflammation; and thus, ill-prepared, they went forth to combat fever, —that disease which numbers more victims than any other,—over the wide dominions of the British crown, in America, in the West Indies, in Asia, in Africa. These men in hundreds, I may say thousands, went out ignorant of the fearful enemy they had to encounter, and trusting, in the teachings which compared the ordinary phenomena of ophthalmia, or those of the healing of an incised wound, or those of the cicatrization of an ulcer, with the symptoms of that terrific group of diseases which embraces the plague, the yellow fever, the bilious remittent, the malignant ague, and the typhus fever. There is nothing more difficult, gentlemen, than for a man who has been educated in a particular doctrine to free himself from it, even though he has found it to be wrong. There is something in the human mind which renders the reception of a doctrine, if it be a bad one, a most dangerous circumstance. It is like the imbibition of particular poison or miasma. We find that some men who have been once exposed to the miasmata which induce intermitting fever, will, for the whole course of their lives, be incapable of getting rid of that poison which has been once received. And thus it is not only with the material, but with the immaterial world. Thus it is not only with physical, but with moral or intellectual impressions.

There is nothing more difficult than to unlearn. This fastening of false doctrine in the mind is one cause; but there are other causes too. The indolence of many men will prevent them taking the trouble to unlearn. The pride of many men has the same effect; and, above all things, there is this, that a very large number of students, not only of surgery, but of medicine, although they were taught the technicalities of the profession, the alphabet of their profession as it were, were not taught what is infinitely more important, namely, how to teach themselves. Now, this is the principal, and ought to be the grand object of every teacher of medicine. I believe that no man can be fully and entirely taught anything. He must teach himself. And what the teacher has to do, and what I have ever set before myself as my highest duty, is to endeavor to teach you how to teach yourselves.

We can easily anticipate what the result of all this must have been; and, I believe I am not saying too much, when I declare, that a large portion of the fearful mortality to which our gallant army has been subjected in the colonial service, has been owing to the circumstances to which I now draw your attention,—the fact of the medical officers going out with erroneous doctrine fastened in their minds. This name of inflammation is a most unfortunate one. It is a great misfortune that the term was given to the process in question. It gives you the idea of a fire which must be quenched by its opposite, water; it gives you the idea of a heat which must be quenched by its opposite, cold; it gives you an idea of vascularity—fullness of the blood vessels—which must be met by measures which will empty those vessels. It gives you the idea of a fever, an excitement which is only to be met by abstinence, by starvation, or, as the French term it, by *diéte absolue*, which means no diet at all. The fact is, gentlemen, that the formula of *contraria contrariis* has as little title to respect in legitimate medicine as that of *similia similibus* in quackery. Both are false; and I really believe that any exclusive application of either formula is both ignorant and mischievous in the highest degree. The next great error was, that although the surgical student had plenty of opportunities of seeing symptomatic fever, he had no opportunity of seeing the essential fever, and he naturally confounded the two together. And hence, here and abroad, for many years the abuse of the antiphlogistic treatment was carried to an extent which it is frightful to contemplate. Conditions of the system which required wine, bark, stimulants, careful nutrition, were met by the lancet, by leeches, and by starvation. I remember when I was a student of the old Meath hospital, there was hardly a morning that some twenty or thirty unfortunate creatures were not phlebotomised largely. The floor was running with blood; it was dangerous to cross the prescribing hall for fear of slipping. Patients were seen wallowing in their own blood, like leeches after a salt emetic; and these disgraceful scenes continued to be witnessed for many years. The terrible symptoms of typhus fever were met by opening the temporal artery, or by a large application of leeches to the head; and over and over again it happened, that the patient died while the leeches were upon his temple—died as surely, and almost as suddenly, as if shot through the head. An eminent apothecary in this city assured me, that when he was serving his apprenticeship, there was hardly a week that he was not summoned to take off a large number of leeches from the dead body. This was not an uncommon thing. I mention these circumstances to show you to what extent, even in our own country, the abuse of this doctrine has been carried. It is not so now. Those who have been in the habit of attending fever hospitals in this country will bear me out when I say, that the lancet is an instrument very seldom indeed employed in our wards.

We must now pass in review the chief phenomena of fever. Let us take a fair type of it, and I am sorry to say that this country is an excellent locality for its study, and has long been so. Fever is to be looked on as a disease to which we can only give a negative character—a disease of which we can say what it is not, not exactly what it is. It is a disease which in its essence may be termed a non-anatomical disease; that is to say, it is a disease which has no known or constant anatomical character. This is the first great point to be impressed upon your minds.

And why do we say this? Because we meet in every epidemic of fever a large number of cases in which, after the general symptoms have run through their course, in such a way as to justify the belief that they present exquisite and perfect specimens of the general disease, the patient dies, and the most skilful pathological anatomist may dissect the brain, the spinal marrow, the nerves, the pulmonary and gastro-intestinal mucous membranes, the structure of all the solid viscera,—every organ you please, and find no anatomical change. I believe, then, that we may go thus far and say, that when the fatal diseases of the world are considered, the malady which destroys most men is a disease in which there is no anatomical character. You all naturally ask, "If this be so, how did the French school come to commit the extraordinary error of declaring, that in every case of fever there was an anatomical character." The reason is simply this, that they committed a great error in medical philosophy,—that of inferring the nature of a disease from the observation of its phenomena in one locality. Had Broussais and his followers studied fever in the wards of the Dublin hospitals, or had they gone abroad and examined fever in the West or the East Indies, or on the coast of Africa, we would have heard nothing of the doctrine that fever was symptomatic of this or of that local disease.

We find, moreover, *that fever is a disease of periodicity*, that it runs a certain period, varying in different epidemics and different individual cases. We find, further, that it is a disease in which a double danger effects the patient. One of these dangers is, that of death from simple depression; for so for from fever being a disease of *plus* vitality, it is a disease of *minus* vitality—a general condition, if we may so speak, of *minus* vitality, which of itself is often quite sufficient to destroy life, and the patient may die, and very often does die of debility alone. The poison of fever has thus a directly depressing influence on the system. But there is another condition,—and this is what I wish to draw your attention to very strongly,—that, in the course of that special mode of life which we call fever, a liability exists to the production of secondary diseases. You will get a good general notion of this by considering the ordinary phenomena of a case of small-pox. The patient is taken ill; he has shivering, pain, fever, and he remains in this state for several days. And then we observe vesicles appearing on the surface, those vesicles filling with pus, afterwards drying, and then disappearing. No man will say, that the fever was symptomatic of the eruption. It is exactly the reverse: the eruption is the result of the

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fever. So it is in typhus. The local diseases are generated by the general. There is this difference, however, between what we term continued fever and the exanthemata: that while in the latter the local disease is almost always, but not necessarily always, accompanied by certain characters, as, for example, in variola there is a certain kind of eruption, in scarlatina—in measles a certain condition of the skin,—it is not so with respect to the secondary diseases of typhus. Now this is a most remarkable circumstance connected with continued fever, that the secondary diseases are inconstant. They are doubly inconstant, in their seat, and in their amount; and, in the same epidemic, we see the greatest possible varieties in the seat and in the amount of those secondary affections. However, between the exanthemata and typhus fever there is this point of resemblance, that the secondary affection is utterly incompetent to explain the general phenomena of the disease. So that we may say, with regard to the secondary affections in typhus fever, that they are inconstant and incompetent to explain the disease. But they are of very great importance. It may be asked, what are those secondary diseases?—are they inflammation? The present condition of medical science furnishes this answer:—they are not inflammation in a vast number of cases, when you consider them in their early stage, but in many instances, after they have existed in this non-inflammatory state for a certain time, there comes on a re-active irritation, and we have then a mixed condition. This is the history of the ulcerations of the intestine. In the begining we find tumefaction and infiltration, but without any appearance whatsoever of inflammation. It has been proved, that in a vast number of cases the disease goes no further, and there is retrocession of the swelling and of the infiltration, just as we see retrocession of the eruption of small-pox; but in others, the parts into which this typhoid matter has been infiltrated take on a reactive inflammation, and then we have a combination of the essential disease and of the local disease, which is now inflammatory, though it was not so at first. We shall have abundant opportunities of proving this.

The treatment of fever is reducible to a simple formula. We cannot cure fever; no man has ever cured fever. Fever in this sense may be called incurable, because we don't know how to cure it. It is, however, curable of itself. If you leave it to its own course, it will often cure itself. The great object, then, is to preserve the patient's life from the dangers which threaten him, pending the existence of his of fever—of this special state of life. If you can keep him alive to the fourteenth day, or the eighteenth day, or the twenty-first day, he will recover. What are the dangers that occur in these cases? One I have already pointed out to you—it is the danger of debility; the other is the danger arising from the accidental secondary affections. We cure the patient by preventing him from dying. We lead him on to that period when, by the extraordinary law of the disease, it will itself spontaneously terminate. We prevent him from dying of exhaustion, by food, by the use of stimulants, and by tonics. We save him from the danger which the local diseases may expose him to, by meeting them as early as we can discover them. And herein lies the whole secret of the treatment of fever—to preserve the patient, at the least expense to his constitution, up to the time when, by the natural law, the disease will spontaneously subside.

CHRONICLE OF MEDICAL SCIENCE.

ANATOMY AND PHYSIOLOGY.

1. *On Diverticula from the Small Intestine.* By John Struthers, Lecturer on Anatomy, Edinburgh.

The author of this paper having met with a considerable number of instances of the diverticulum from the small intestine, gives, in the Edinburgh Medical and Surgical Journal, a learned essay on the subject.

According to Munró, these appendices are formed either by a gradual elongation of the intestine, owing to adhesions of the bowels, or by protrusion of the mucous membrane through the outer coats of the intestine. Others think that the diverticulum is a congenital formation, whilst Meckel's explanation is, that it results from the early connection between the umbilical vesicle and the intestine of the embryo remaining partially unclosed, and growing as the intestine grows.

Some, admitting the congenital nature of the diverticulum, objected to Meckel's view, on the ground that he could not demonstrate an actual communication from the umbilical vesicle into the intestine of the human embryo; and Oken's hypothesis was that the communication took place with the cæcum, and that the appendix vermiformis was the remains of this early connection.

The latter view, however, is a mere hypothesis, and is set aside by the demonstrable fact that the cæcum is seen forming at some distance from the point where the vitelline pedicle is found to be connected with the small intestine.

Meckel's arguments in favor of his hypothesis are, that the characters of these diverticulum indicate them to be primitive formations, having the same structure as, and continuity with, the intestinal coats; that they occur almost always at the same points of the intestine, and that the connection between the umbilical vesicle and the bowel takes place at the same points, viz., on the ileum near the cæcum; that we sometimes perceive in young fœtuses a canal, which goes across the umbilical sheath from the vesicle to the abdomen, and by which we can at pleasure empty the vesicle of its fluid and fill it again, and that it is not unfrequent to find, in the full-grown fœtus, a canal which extends from the intestine to the umbilicus, which opens in this latter place, and is always attended by the omphalo-mesenteric vessels. And lastly, the analogy with birds, fishes and reptiles, proves that the communication in dispute exists at all periods of fœtal existence.

Mr. Struther agrees generally with Meckel in his deductions, and divides these diverticula into true and false. Those hernias of the mucous membrane through the muscular coats of the intestine are thus styled false diverticula.

These bodies may be considered pathologically, under four heads: As a cause of strangulation of the bowels; as part or the whole of the contents of a hernial sac; as predisposing to the lodgment and accumulation of foreign matters, and lastly as parts of themselves, liable to disease.

2. *Valves in the Splenic Vein.* By Dr. Crisp.

At a *physiological meeting* of the Medical Society of October 10th, 1853, Dr. Crisp announced his discovery of valves in the splenic vein, and presented preparations of the spleen of various animals. The presence of valves are easily demonstrated in the splenic veins of the horse. Dr. Crisp's preparations exhibited them also in the tapir, deer, giraffe, adax, zebra and ass. The small veins terminating in the splenic vein are furnished with valvular orifices, and so prevent regurgitation into the spleen. Dr. Crisp had not found these valves in man, or in any of the quadrumana, and had sought for them in vain in the capybara, one of the highest rodents; but had found them in many of the carnivora, pachydermata and ruminantia, and believed them to be universal in those orders of mammals. Dr. Crisp believed that he was entitled to claim this as a discovery, for so far as he knew, all authors deny the existence of valves in the abdominal veins.

3. *On the Excito Motory System of Marshall Hall.* By J. G. Davey, M. D.

The author of this paper endeavours to show that the excito motory phenomena, as explained by Dr. Marshall Hall rests on a basis which even *he* up to this time has failed to recognise. His object is to demonstrate that the true spinal functions stand in no need of the distinct set of nervous fibres—the exodic and eisodic nerves—which Dr. Hall describes and Mr. Grainger endeavored to demonstrate with the scalpel; but that the sensory and motor spinal nerves are of themselves sufficient to create all the phenomena with which Dr. Hall has made the profession so fully acquainted.

Dr. Davey contended that the excito motory system can be roused into action when the spinal marrow has been separated from the brain, or even in the case of an acephalous monster born without a brain; but even more; that precisely the same phenomena have occurred in monsters born without either a brain or a *spinal marrow;* and quotes Sir Gilbert Blane to support him in this statement. He declares that the reflex actions properly so called, are nothing more than an amplification of the ordinary spinal functions; an additional exciting cause either from within or without.

An effort is then made to prove that the *organic system,* with the solar ganglion for its centre is the great mainspring of all the phenomena of life; whether they relate to the organic or animal functions; whether to the brain, spinal marrow or any other individual part of the whole organism. He declares that the ganglia of the sympathetic system are in existence in the embryo anterior to the cerebro spinal organism, and that the medulla spinalis, as well as the brain; the heart and other internal viscera; all exercise their several functions in virtue of the power derived from the ganglionic system. He denies the correctness of Dr. Hall's experiments and states that the removal or destruction of the sympathetic system in the frog has always been found fatal to the true spinal phenomena. The motions so obviously perceptible are nothing more than retained nervous influence, and continue no longer than the peculiar contractile irritability remains. The following passage is quoted from Dr. Hall's book on the "Nervous system" to strengthen his position. "I must add that as the irritability of the internal organs depends much on the ganglionic system, so that of the muscles of the limbs may partly depend on the latter system. Although I have observed this irritability to be greatly diminished by the removal of the influence of the spinal marrow, I think," he adds, "I never knew it to be completely annihilated under such circumstances."

Again, Dr. Davey says, the function of respiration is under the control of the spinal system, and when that ceases, it is an evidence that the spinal cord has lost its functions. How, then, can we account for the fact that the uterus has been able to expel a child after respiration had entirely ceased, which he declares to have occurred, unless upon the supposition that the ganglionic system still continued to give vitality and muscular power to the organ?

He therefore believes—

"1. That the more complicated anatomy of the spinal cord, suggested by Dr. M. Hall, and sought for by Mr. Grainger, has not yet been realised.

2. That the mere sensory and motor nerves or roots are themselves sufficient to the integrity of all those phenomena called excito-motory, which emanate from the spinal cord; or, in other words, that there is no necessity for any distinct division of the nervous (spinal) system, for the production of the excito-motory phenomena.

3. That the exercise of the functions of the spinal cord is due to the peculiar influence of the ganglionic nervous system, exerted on its organism.

4. That both the external and internal excito-motory phenomena, are alike dependent on the vital stimulus imparted by the great sym-

pathetic nerve, and, in the former instance, through the instrumentality or medium of the medulla spinalis.

5. That such is the relationship between the great nervous centres, viz., the brain, spinal cord, and the solar ganglion, that the second, (viz., the spinal cord,) being at one time under the dominion of the first, *i. e.* the brain, and at another time under that of the third, *i. e.* the solar ganglion, and being thus intermediate, will now manifest a cerebral or voluntary power (and this the result of consciousness, and, of course, volition,) and then (the antecedent circumstances being dissimilar) display one of an involuntary, automatic, or instinctive, or excito-motory character; but this only, of course, when the organic nervous apparatus is in the ascendant, and the brain, comparatively quiescent—or, in other words, when sensation (spinal) and motion, and not consciousness and volition (cerebral attributes) are in operation, if I may be allowed so to express myself.

6. That the great sympathetic nerve is endowed with a specific and independent power, to which both the brain and spinal cord, and with them, of course, their functions are subordinate."

4. *Researches on the Sympathetic Nerve.* By M. Claude Bernard.

When the great sympathetic nerve is divided in the neck, or its ganglia excised, the results which follow are, retraction of the eye-ball, contraction of the pupil, redness of the conjunctiva, and the projection of the cartilage of the third eye-lid. These phenomena were observed first by Pourfour du Petit (1727), and afterwards by Dupuy, Brachet, and John Reid. In 1846 M. Biffie noticed that by galvanising the cephalic end of the divided nerve, the pupil which was contracted in consequence of the section of the nerve, would become again dilated.

The experiments of MM. Budge and Waller proved that the influence transmitted by the sympathetic was derived from that portion of the spinal cord situate between the last cervical and sixth dorsal vertebra, which they named the cilio-spinal region.

M. Bernard announced to the Academy of Sciences in March 1852, his important discovery of the great increase of animal heat, and of sensibility on that side of the head on which the sympathetic was divided; and also ascertained that upon the application of galvanism to the upper end of the nerve this animal heat would disappear. Budge referred this increase of heat to the cilio-spinal region. Waller and Brown Séquard explained the increased heat, and vascularity by the paralysis of the arterial system caused by section of the nerve; Brown Séquard claiming to have been the first to show that galvanism of the sympathetic diminished the temperature and produced contraction of the arteries.

M. Bernard then proceeded to prove by a series of experiments.

1st. That a division of the sensory nerves in addition to the abolition of sensation also diminished the temperature of the part.

2d. The division of the motor nerves destroyed the power of motion and also diminished the animal heat of the parts.

3d. The destruction of the sympathetic producing neither a loss of motion or sensation, greatly increased the temperature.

This augmentation of the animal heat is therefore a property peculiar to the sympathetic nerve. The elevation of temperature begins instantaneously with the section of the nerve, and amounts to 4° or 5° centigrade. The excess of calorification upon a section of the nerve lasts in rabbits from sixteen to eighteen days, and in dogs about two months; but after extirpation of the ganglia, its effects have remained very intense a year and a half after the removal of the ganglia.

Upon the application of galvanism to the divided nerve, reverse phenomena are produced. The pupil dilates, the vascularization of the parts disappear, and their temperature falls.

"I have only wished," says the author, "in this communication, to establish one point in the complex history of the great sympathetic, namely, that the section of the filaments or ganglions of that nerve possesses constantly the privilege of increasing the calorification of the parts to which it is distributed. These phenomena are only the exaggeration of what naturally takes place in the production of animal heat. In giving the means of increasing the production of heat and localizing it in external parts which are easily observed, I had thought of rendering more accessible to our means of research the study of that important function which is still so little known, but which cannot be investigated elsewhere than in the greater or less activity of the chemical metamorphoses which the blood undergoes in the living textures under special influences of the nervous system."—*Gaz. Med.*

For the above important researches, the Academy of Sciences awarded to M. Bernard the annual prize of experimental physiology for the year 1853.—Ed.

5. *On the Results of Section and Galvanization of the Sympathetic Nerve.* By M. Brown Sequard.

The results of M. Séquard's experiments differ in some respects, particularly in their interpretation, from those of M. Bernard. He attributes the effects of section of the sympathetic to paralysis of that nerve, and the effects of galvanization, to the increase of its normal actions, and he claims priority in regard to the contraction of the vessels, and diminution of the temperature which follow the application of galvanism. He maintains that analogous results may be obtained by the lesion of certain parts of the nervous centres, or after the section or galvanization of the cerebro-spinal nerves and concludes:—1st, The paralysis or cessation of action of a part of the great sympathetic nerve, after section or excision, is followed by dilatation of the blood-vessels, next by a considerable afflux of blood, an elevation of temperature, a manifest augmentation of the vital properties of the muscles and nerves of the face on the side operated on. 2d, The energetic action of the great sympathetic on the neck, when it is galvanized, produces the contraction of the blood-vessels, which is followed by diminution of the quantity of blood in circulation in the face and ear, and decrease of temperature and of energy of the vital properties of the muscles and nerves of the side of the head which has been operated on.—*Gaz. Med.*

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Portion of Intestine Discharged after Intussusception.*

Dr. Paterson of Leith exhibited before the Medico Chirurgical Society of Edinburgh, a portion of intestine, still invaginated, about ten inches long, which had been passed by a patient of his, twelve days after the occurrence of ilius.

The patient, a girl, nine years old, made a perfect recovery. The disease began after an attack of dysentery. Much vomiting and great prostration of strength occurred at first; on the fifth day, a large quantity of bloody serum was passed by stool, and without any feculent matter; on the seventh day, a small quantity of feculent matter was passed, and occasionally till the twelfth, when a perfect relief occurred to all the symptoms on the passage of the large portion of intestine shown to the Society. The treatment which was pursued, was the application of morphia to the blistered surface of the abdomen, and opium by enemata, as recommended by Dr. Evans of Carlisle.

2. *Ulcerations and Perforations of the Large Intestine Consequent on Typhoid Fever.* By Dr. Leudet.

In typhoid fevers is it not uncommon to notice that patients either continue in a state of prolonged debility after the acute symptoms have subsided, or suffer a relapse even after convalescence has commenced. Sometimes with these symptoms of adynamia, there is combined a diarrhœa, at first moderate, but progressively increasing. In other cases, again, diarrhœa is absent. These phenomena, according to the author, have not sufficiently attracted the attention of observers, although they are not deficient in practical interest; for, in truth, all the dangers of typhoid fever are not by any means confined to lesions of the small intestine, to their incomplete cicatrisation, to perforations of this part of the digestive tube, or to some intercurrent maladies. The lesion may diminish, nay, cease in the small intestine; and the large intestine become the principal seat of disease, and the cause of the morbid phenomena. These lesions offer every degree, from simple inflammation of the walls of the large intestine,—follicular enteritis, superficial ulceration of the follicular elements, softening of the mucous membrane,—to the production of ulcerations more or less large and deep, occupying sometimes the whole extent of the digestive tube, and leading, in severe cases, to perforation.

As regards the pathological anatomy of these different lesions, M. Louis, in his "Traité de la Fièvre Typhoide," remarks, that he has witnessed ulceration of the large intestines in fourteen subjects only; and Andral (Cinique Medicale) affirms, that such ulcers are extremely rare. Chomel, however, has published some cases, in which the disease of the large intestine has made more progress. The form of the ulcerations is that of the follicles of the cœcum; they appear as little losses of substance, with sharp, defined borders, of the diameter of a pin's head, and confined to the mucous membrane. The follicle is distinguished from the surrounding mucous membrane by its slightly paler colour; generally it does not undergo augmentation in size, but it occasionally becomes as large as a pea. In other cases, the ulceration, instead of resembling a simple loss of substance, presents irregular edges, thickened and surrounded by a yellow matter, similar to that observed in Peyer's patches, at one period of the morbid evolution of their ulcers.

From this latter stage to one more advanced there is but a single step. The ulceration increases; it acquires the size of a franc-piece or a crown, and ultimately becomes confounded with the neighbouring losses of substance, giving rise to ulcers, interrupted by irregular folds and bands, the remains of the normal intervening mucous membrane. At this stage there is a change in the aspect of the ulcerations. A black colour pervades them, dependent upon a deposit of pigment, often found in the surrounding mucous membrane beyond the immediate seat of disease. The author has seen more cases than M. Louis, in which perforation has extended into the peritoneal cavity.

Moreover, in the mucous membrane adjoining the ulcerations two opposite conditions, as yet unexplained by pathological anatomists, have been remarked; the one a morbid softening and thinning; the other hypertrophy.

The ulceration may assume that form described by MM. Monneret and Fleury as villous enteritis. The surface is rugous, unequal, and covered with a number of small granulations, partial hypertrophies, mixed with ulcerations. With this lesion there is usually hypertrophy of the walls, and of the submucous and muscular layer. The author relates an interesting and illustrative case of disease of the large intestine. Joseph R., aged 35, was admitted into La Charité, with symptoms of typhoid fever, having been ailing a fortnight. He suffered from severe headache, deafness, moderately abundant diarrhœa, an eruption of rose spots over the abdomen, and some large crepitation at the base of the lungs. In two weeks he was so far recovered as to take a little nourishment. For fifteen days convalescence went on uninterruptedly, when suddenly symptoms of pleuro-pneumonia showed themselves at the base of the right-lung, and the diarrhœa re-appeared.

The former yielded to treatment, but the latter continued for several weeks, at the end of which the patient died. Upon examination, there was found about a pint of clear, straw-coloured fluid in the peritonæum. Towards the extremity of the small intestine Peyer's patches were seen ulcerated, but cicatrised by means of fibro-cellular tissue extending between the edges of the ulcers. In the cœcum isolated follicles were largely ulcerated. In the colon and rectum the mucous membrane was most extensively ulcerated, and divided by large transverse bands. The ulceration did not extend beyond the sub-mucous tissue. Both the sub-mucous and muscular tissue were considerably hypertrophied. In the posterior wall of the gall-bladder there was a purulent collection, circumscribed, and about the diameter of franc-piece.

As regards the abscess in the walls of the gall-bladder, the author thinks that it is not accidental, but is connected with the lesions in the large intestine. He has remarked adhesion between the gall-bladder and the transverse colon, and signs of intense chronic congestion of this part of the alimentary canal. Louis, Henoch, and Budd have recorded cases of pus contained in the gall-bladder; but in the case here related the pus was not mixed with bile, but in a circumscribed abscess. Hence it could not be referred, as Budd, and especially Henoch have imagined, to modification in the composition of the bile. M. Archambault has related a case to the anatomical society of Paris, in which the gall-bladder was perforated, and pus escaped into the cavity of the abdomen.

Perforation of the large intestine after typhoid fever has been noticed, though rarely. The author relates a case of perforation of the descending colon, published from the "Clinique Médicale" of Récamier, by M. Chomel. Perforation of the cœcum by the author (two cases), combined with extensive ulceration of Peyer's glands in the ileum.

One patient lived more than a month after the perforation had been announced by local peritonitis. The absence of general peritonitis caused by the escape of fæcal matter was explained by the adhesion of the rectum and the omentum to the ulcerated part.

All authors agree in saying that the most frequent seat of the disease is the cœcum. The ulceration was limited to this part of the large intestine, in nine cases by Louis; in eight by Andral; and in seven observed by the author. But other parts of the large intestine may be affected alone. M. Louis saw a case in which the ulcerations were confined to the descending colon.

It will be seen at once that these lesions are very nearly such as characterise chronic dysentery.

Monneret and Fleury believe that obstinate diarrhœa excites these ulcerations, but diarrhœa may continue without serious morbid change; and its intensity does not stand in fixed relation to the intensity of the lesion. The worst cases were those in which death ensued on the 50th—69th day of the disease.

The author concludes, that the development of ulcerations in the large intestines during the course of typhoid fever is possible; that such ulcerations prefer the cœcum as their seat, and may exhibit every degree, from superficial ulceration of the mucous membrane to deep and extensive ulceration, to destruction of the entire wall, and to perforation; that perforation of the large intestine is susceptible of cure; these ulcerations are especially likely to be met with in cases of slow convalescence, accompanied by prolonged diarrhœa and prostration of strength; but that no diagnosis can point with certainty to the existence of the lesion, its seat, or intensity.

The treatment is that of chronic enteritis of the large intestine. M. Gendrin employs external frictions, with stimulating fluids, such as spir. ammon. aromaticus.—*Gaz. Hebdom. de Méd. et Chir.*

3. *Valerian in Polyuria.* By M. Trousseau.

We read in the *Journal de médecine et de cherurgie pratiques* an account of a case of *diabetes insipidus* which is remarkable in respect to the quantity of extract of valerian administered to the patient.

A man entered the Agnes ward at Hôtel-Dieu, more than a year ago, passing four gallons of urine in the twenty-four hours, which urine contained no sugar. M. Trousseau considered the disease the result of faulty innervation, and opposed it by valerian. The patient took this drug in progressively increased doses. On the 22d of January 1852, the dose was a drachm and a half daily, combined with eighty grains of bi-carbonate of soda. The amount of urine after one month of treatment fell to one gallon. On the 15th of February, the patient took four drachms of extract of valerian, and a bottle of Vichy water. On the 20th of July, the dose of valerian was one ounce daily, with a drachm of tris-nitrate of bismuth, and a ptisan of hops and chicory. At this date the patient passed two quarts of urine. The reporter of this case states that, on the last occasion on which he saw this patient he was still taking valerian, and the urine was still approaching its normal conditions.

This is certainly an interesting fact, and one which it will be profitable to recollect in cases of non-saccharine diabetes. O.

4. *Ranula Treated by an Injection with the Alcoholic Tincture of Iodine.* By Dr. Borelli. *Gaz. de Hôpitaux.*

N. N., aged 50, of robust frame, a great smoker, became the subject of ranula from dilatation of Wharton's duct. The cyst, which was the size of a pigeon's egg, was punctured by a lancet, and then filled with the tincture of iodine, of which a part was allowed to remain. For some hours afterwards there was severe pain. Upon the following day there was a moderate amount of inflammatory swelling; but the symptoms subsided, and the cure was complete by the twelfth day; the mucous membrane then presented its normal colour and appearance.

The next two cases, equally successful, afforded nearly the same histories, and need not be detailed.

The chemical examination of the saliva and of the fluid in ranula shows that there is not perfect identity between the two, but a very great analogy. Both present a feeble alkaline reaction; both contain phosphate of lime, the chlorides, and ptyaline; but in the first there is albumen, which coagulates with heat, and sulpho-cyanurets, which are not met with in the second fluid, where, in place of albumen, there is another protein compound, which is abundantly precipitated by alcohol, gallic acid, or corrosive sublimate.

5. *Perchloride of Iron to Arrest Hæmorrhages in Cancer of the Uterine Neck.*

We have employed, observes M. Remilly, the perchloride of iron to arrest the uterine hæmorrhages which so frequently accompany cancer of the neck. It is administered by injections, in the strength of 15· of the perchloride to 250· of water. The dose required is usual 15 grammes of the perchloride (5 drachms English). A woman, aged 60, suffering from cancer uteri, voided daily large clots of blood from the vagina, some as big as the fist. Two injections, (Sept. 12,) at the interval of five minutes, sufficed to arrest the hæmorrhage for three days. On the 15th, the blood flowed again, when two fresh injections were administered with success. On the 16th and 17th, the injections were continued without any recurrence of hæmorrhage. On the 18th, the patient, who had lost no more blood, became pale and faint after the second injection,—symptoms which seemed referrible to the remedy, as the external organs of generation were temporarily swelled. She soon, however, recovered; and, from October 26 to November 19, has remained free from any return of the bleeding.

A second patient, aged 49, suffering from soft, vascular, fungous growths from the os uteri, accompanied with a discharge of dark fœtid blood from the vagina, was subjected to the same treatment. The first injection produced an immediate disappearance of the discharge. The day following there was a second discharge, which was not arrested by the injection, but the patient declared that the instrument had been badly introduced. The next day the remedy was used with more care and with complete success.

A third and a fourth case are related by M. Remilly, illustrating the decided benefits ensuing from this plan of treatment; and he remarks, that not only does the injection relieve the patient from troublesome and often offensive discharges, but that it retards the progress of anæmia, and prolongs her existence. It is impossible to say what effeet the perchloride may have upon the future progress of the cancerous disease; but it may assist, by arresting weakening losses of blood, in rendering more decidedly beneficial tonic and ferruginous remedies employed so often without the least success in combating cancer and its complications.—*Bulletin de Thérapeutique.*

6. *Tartarized Sulphate of Quinia.* By Dr. GALAMINE.

Dr. Galamine (*Bulletino delle Sc. Med.* xxi., p. 99,) speaks in strong terms of praise of the febrifuge power of sulphate of quinia when combined with equal parts of tartaric acid—a much smaller quantity of the alkaloid so administered sufficing. During an epidemic of ague, it was given in 43 cases, in 31 of which it speedily effected a cure. In 21 of these, half a scruple sufficed, while in ten others, it required more continued use. In most of the cases, there was hyperæmia of the brain or bronchial membrane, enlarged spleen, or gastro-biliary derangement, requiring the preliminary employment of bleeding or purgatives. Of the 12 other cases, 5 had relapses; in 3 no effect was produced; and in 4, the above-named irritative symptoms returned.

SURGICAL PATHOLOGY, &c.

1. *Upon Wounds of Arteries.* By Prof. LUIGI PORTA, Pavia.

The author performed 130 experiments upon the larger arteries of dogs, to observe the processes by which hæmorrhage was arrested and the parts repaired.

Punctured wounds (single or double punctures by a trochar of two lines diameter into the aorta or the carotid) were followed by coagulation of the effused blood in the course of a few seconds, and by speedy immediate union. In the recent state the wound was indicated by a red spot, which ultimately disappeared, leaving no trace and producing no change in the elasticity of the walls of the vessel. Sometimes the surrounding areolar tissue, formed an eschar, and concurrently, a layer of lymph was poured forth between the edges of the wound, to become converted into a pseudo-membrane, generally thinner than the natural structure and translucent. Union by lymph is, however, the exception; the greater number of cases are healed by the lateral thrombus. The blood retained by the external parts (the fibrous sheath ?) becomes coagulated in a layer parallel to the artery lying between the edges of the wound and forming a plug. This constitutes in lower animals a sufficiently strong process of repair, but in man most authors agree that it is often followed by aneurism.

Incised wounds, (longitudinal and transverse, with the tenotome, or with Beer's knife into the aorta, carotid, external iliac, and femoral arteries,) produced fatal hæmorrhage, when the incision exceeded 3 millimetres (1½ line) in length. Cæteris paribus, a longitudinal cut, is followed by a less degree of hæmorrhage than a transverse one; the blood, retained by the integument, etc., forms a voluminous clot, which left to itself, becomes speedily absorbed, and in the course of a few weeks leaves scarcely a trace in the body. The aneurism, described by Jones in a dog eighteen days after a transverse wound of the carotid, was most likely a cyst containing blood—an occurrence which the author has often witnessed. The thrombus lateralis is the readiest mode by which nature closes the arterial wound. The stream prevents the coagulation of blood within the vessel; except in so far that a thin layer is prolonged for a short distance over the lining membrane, thus directly closing the opening. The lateral thrombus rarely extends into the vessel, being attached to the outer wall, and about the shape and size of a small hazel nut. In a few weeks it becomes smaller, of pale red colour, or fleshy consistence, and adherent to adjacent tissues as if organised. To those who deny the organisation of blood, the author says that he has watched this hard knot for above a year, and found it still adherent. He does not know whether it ultimately disappears; but he has traced blood vessels into it by the aid of the microscope. The neighboring parts of the artery show less sympathy after wounds than after the application of a ligature. In these experiments the areolar tissue alone presented signs of inflammation, but it soon returned to its normal state. The edges of the inner coat speedily became united. In a few days after the injury there was neither injection nor exudation, but only a slight swelling covering the wound and the base of the thrombus, formed of a gelatinous matter, coated by a kind of epithelium, resembling that seen lining a healthy artery. This may ensue in a week. The middle coat undergoes no speedy change; it is closed either by mechanical approximation of its fibres, or by the formation of an adventitious membrane. Should, however, the clot be permanent, then the aperture in the middle coat remains, shut up by it. Of 100 wounds in arteries, the author found 91 closed by the lateral thrombus, the remainder by a coagulum of lymph. This latter is first yellow, or yellowish red, glutinous, and forms a cement, which solders the opening. It belongs to the middle coat, but never exhibits the peculiar circular fibres of this structure. In many cases both processes are combined, the wound being first closed by the thrombus, then by the effusion of lymph. Thus it appears, that after incised wounds of arteries, the external areolar coat is healed by immediate union, the internal coat by the formation of a tissue precisely similar to the normal: the middle coat is closed by the lateral thrombus, or in fault of that, by a new areolo-ligamentous tissue. The direction of the wound does not influence the mode of repair.

Wounds caused by heat were inflicted by nails and metallic wires. The artery was exposed, and then touched with the heated instrument until the blood spurted out; this usually occurred in a few seconds, and fatal hæmorrhage ensued, unless the aperture were small. In some instances, an internal thrombus formed, or the whole diameter of the vessel became gangrenous. Extensive suppuration ensued in consequence of the extravasation of blood, and death resulted from secondary hæmorrhage; but when the experiment was performed with proper precautions, union *per primam intentionem* rapidly followed. In the first days, lymph was effused in the sheath, or occasionally within the tube; but the ordinary means of closure was the lateral thrombus, as in the case of incised wounds.

It has long since been known, that, in man, wounds of arteries may heal without obliteration of their calibre; but it is affirmed, that such an occurrence is liable to be followed by aneurism. This is not always the case. Should active hæmorrhage ensue, an internal clot forms, either from the patient's fainting, or in consequence of compression. The author relates an instance of copious hæmorrhage from the brachial artery, consequent upon a wound with a knife, which ceased after syncope, and the patient recovered, with loss of pulsation down to the elbow. He affirms, that the lateral thrombus may be, in man, a means of union, not only in arteries of the second and third size, but even in the aorta, near its origin. By examining the pathological results, as obtained from man, two sets of cases may be established. In the first, the wound is closed by a small sacculated aneurism filled by a coagulum; the opening in the walls of the vessel is then permanent, and any exertion may force out the clot, and lead to enlargement of the swelling. In the second, the lateral thrombus closes the opening, becomes organised, and forms a cicatrix sufficiently firm to resist further change. —*Delle Ferite delle Arterie. Milano.*

2. *Local Anæsthesia. Gaz. de Hôpitaux.*

The production of local anæsthesia in disease by the direct application of the vapour of chloroform, was first brought into notice by Dr. Hardy of Dublin, and has lately excited much attention.—(*Dublin Quart. Jour.*, Nov. 1853.) The instrument, which he invented for the purpose, consists of a small metallic cylinder holding a sponge: a pipe is fixed at one end, and to the other end a gum elastic bottle is attached, provided with a valve for the admission of air. When the sponge is moistened with chloroform, pressure on the elastic bottle forces the vapour through the pipe, and the jet of vapour can be applied directly to the affected part. The first effect produced by the application of the vapour is a sensation of heat, which may even cause uneasiness; but this is quickly succeeded by the subsidence and complete removal of pain. The relief is said to be as speedy and perfect as it could be by inhalation, and is so permanent that the pain does not return again for several hours, and then only in a mitigated degree: and there are no unpleasant subsequent effects, such as occur after inhalation, or after the use of narcotics. Dr. Hardy relates several cases, mostly of uterine disease, and generally of a very painful and distressing kind, in all of which immediate and complete relief was afforded by the anæsthetic douche. His first case was one of cancer of the uterus, where the excessive suffering was completely removed in a few minutes by the chloroform vapour; and when the pain afterwards returned, the same means were always resorted to, with a like effect. In his second, third, fourth, and fifth cases, which were examples of uterine disorders, attended by great pain of the back and womb, the douche applied to the uterus caused the cessation of the pain, first in the back, and afterwards in the womb. In a case of great irritability of the nipples, in various other forms of local irritation, and particularly in a case of pruritus pudendi, the anæsthetic application was equally successful.

From this experience of its action, Dr. Hardy considered the local application of chloroform to be preferable to its inhalation.

Thus strongly recommended, the practice was repeated lately in Paris pretty extensively, but, unfortunately, the same success has not attended it. At first, indeed, M. Nélaton, after applying the douche, incised an abscess on the foot without the patient showing any symptoms of pain; and M. Dubois produced insensibility in a painful abscess of the axilla and wound of the back of the hand. But, with these and a few other exceptions, the douche has generally failed to produce anæsthesia in surgical operations. Velpian used it, without success, in a case of abscess and of cancer; Giraldes and Nélaton in subsequent trials; Gosselin and Ricord found no effect produced by it; and Roger found it completely ineffectual in producing anæsthesia on the sound skin. Langier, however, states that he has found this method of service; and, in a case of painful stump, after amputation of the thigh under M. Larrey, the patient felt great relief from his sufferings after the chloroform application. With the view of increasing the effect, several modifications of the original apparatus have been devised. M. Rickard used a much larger reservoir of chloroform, and expelled the vapour by means of bellows. In a case of fistula in ano, in which he employed this apparatus, however, no other effect was produced except a sensation of cold; the incisions were as painful as they generally are. M. Maisonnenue having to perform amputation of the toe, enveloped the foot in an india-rubber bag, in which chloroform was poured, so as to keep the part in an anæsthetic vapour bath; but, instead of insensibility, a painful feeling of burning, and so much local hyperæsthesia were produced, that the operation had to be put off till next day. In short, the method has so completely disappointed expectation, that the surgeons have latterly entirely abandoned it. M. Velpian, indeed, thinks that ether and chloroform cannot produce anæsthesia unless they are absorbed by the lungs; and he looks upon Dr. Hardy's cases as not at all conclusive, in consequence of the irregular duration of uterine pains, and their frequent spontaneous disappearance. Yet, even in uterine cases, M. Dubois has renounced its use as quite ineffectual. In consequence of the failure of Dr. Hardy's plan, attention is now being directed to other local anæsthetics. Velpian still uses in many cases the production of cold by a freezing mixture of ice and common salt; and the cold produced by the volatilization of ether and chloroform has lately been tried, as likely to be more efficacious than the douche. M. Ricket has employed this local anæsthesia by refrigeration in two cases, with partial success. The chloroform or ether was dropped upon the part, and its volatilization hastened by a current of air from a ventilating apparatus which M. Mathieu has invented. The incisions which were made in the part caused so little pain, that there could be no doubt that the sensibility was deadened by this means.

3. *Local Anæsthesia.* *Monthly Journal of Medical Science.*

However deficient in success hitherto, local anæsthesia is of such great practical importance, that it well deserves to be investigated and carried out, with all the appliances and resources of modern ingenuity. We understand that Professors Syme and Simpson have made trial of the anæsthetic douche in cases of abscess, but although a slight and superficial impairment of the sensibility was noticed, no diminution of the feeling of pain took place. Dr. James Arnott's plan, of freezing the skin and subjacent parts, seems to us well adapted for minor operations in surgery, and we feel surprise that it has not been more extensively tried in this country. M. Velpeau has pronounced strongly in its favour. M. Richat has published some cases of operations performed without pain, by means of an ingenious apparatus, constructed by M. Mathieu (figured *Gaz. des Hop.* April 1st.) By this instrument a fair amount of ether and of air is simultaneously directed to the part. Dr. Liegard (de Caen) has pointed out that the peasants in Lower Normandy have long been in the habit of preventing pain by squeezing strongly the fore-arm or leg, when operations are performed on the hands or feet.

4. *Successful Obliteration of the Innominate Artery.* By Dr. PEIXOTO, of Rio Janeiro.

The *Bulletin* of the French Academy of Medicine of March 15th, contains a report by Prof. Velpeau on fifteen surgical observations communicated by Dr. Peixito, most of which relate to brilliant operative achievements, and deserve to be recorded among the triumphs of South American surgery.

Four of these cases are instances of successful ablation of enormous scrotal elephantiasiacal tumours. The first occurred in 1838. A tumour weighing 32 pounds was extirpated with complete success. This was the first operation of the sort ever performed at Rio Janeiro. In the third case, the tumour was 54 inches in circumference, and weighed 66 pounds (33 *kilog.*)

Dr. Peixoto also records two cases in which he practiced lithotrity successfully, in 1838, with the instrument of Hearteloup; which were the first operations of the sort ever practised in Brazil or Montevideo.

"But," says M. Velpeau, "the most curious observation in Dr. Peixoto's collection, is incontestably, that of the obliteration of the innominate artery by a temporary ligature. The case is succinctly as follows:—

"An erectile tumour of the right ear. Several ligatures of the external and internal carotids had been applied at Paris. On the 14th of November, 1851, Dr. Peixoto tied the primitive carotid at its middle portion. Frightful hæmorrhage on the separation of the ligature. Temporary ligature at the origin of the carotid from the brachio-cephalic trunk; formation of a clot in the innominate itself, after twelve days of compression by the temporary ligature, which produced neither sufficient ulceration or inflammation of the artery to divide it. Complete cure at the end of two months. Dr. Moura, the subject of this observation enjoys the best possible health.

"This, I believe, is the first example of *cure* after artificial obliteration of the brachio-cephalic trunk, and it does honour to the coolness, the dexterity, I had almost said to the *courage* of the operator.

"This, then, is a fact gained: the *arteria anonyma* may be obliterated by means the ligature. The observations of Pelletan and Martin Solon, and the cases published by Darrach, have already demonstrated that the accidental occlusion of that vessel does not necessarily deprive either the arm, or the head, of a sufficient circulation; but it remained to be proved that this same result could be obtained by operative surgery, without the production of fatal accidents.

"Dr. Mott, who enjoys the honour of having first practised this grave operation (in 1818), had the misfortune of losing his patient on on the twenty-sixth day. Graefe's patient died on the sixty-eighth. The patient of Bland succumbed on the eighteenth, and that of Dr. Hall, on the sixteenth day. In Lizar's case, death ensued in about three weeks. I may add that in an operation done by Kuhl, the ligature comprised both the subclavian and carotid just at their origin and produced a fatal result on the third day. M. Arendt has told me that a patient on whom he operated in 1826, died on the eighth day, and that in two operations practised by Dr. Bujalski, death supervened in two or three days in each case. M. Hutin was not more fortunate; his patient died on the ninth day.

"Hence: ten cases—ten deaths!

"Are more examples necessary to banish forever this resource from the domain of surgery? Does the success of Dr. Peixoto counterbalance this lamentable necrology?

"Let us see. If an aneurism occupies the brachio-cephalic trunk itself, no one would dream of placing a ligature between the tumour and the aorta. It is, then, when the lesion occupies the primitive carotid or the subclavian. But then, of two things one will exist: 1. A space remains between the tumour and the summit of the chest, and it is possible to ligate the sound portion of the branch artery;—or else; 2. The aneurism extends to the vicinity of the sterno-clavicular articulation; and who, in such a case would dare to affirm that the innominate itself was not involved in the tumour? Have we not, moreover, in these extreme cases, the method of Brasdor, which without offering much hope, has at least the advantages of easy execution and less immediate danger.

"No, so near the arch of the aorta, upon so short and so large a vessel located within the thorax, and between such important arteries, on such an artery the ligature cannot be otherwise than a murderous operation, an operation which should never be attempted again, which cannot be considered pardonable hereafter.

"The case of Dr. Peixoto scarcely falls within the category of ligations of the *arteria anonyma*. In this case the surgeon's hand was forced, as it were. The carotid had been tied, hæmorrhage had followed, and death was impending; there was no choice possible. A riband was placed around the innominate by way of a temporary ligature, flattening the vessel without dividing its coats. The patient having recovered we are unable to *affirm* that the ligature embraced the common trunk rather than the commencement of the carotid alone. Morever, nothing proves absolutely that the innominate artery was not obliterated by the previous ligatures rather than by the simple temporary ligature.

"The reflections detract nothing from the merit of Dr. Peixoto. We make them simply to protect the principles and responsibility of the Academy, and we propose none the less :

"1. To refer this communication to the committee on publication, in order that an extended extract from it may be inserted in the Memoirs of the Academy.

"2. That the author shall be admitted as a candidate for the title of *foreign correspondent* of the company."

After the reading of M. Velpeau's report, M. Malgaigne expressed some doubts as to the reality of the ligation of the innominate in this case. He thought that a ligature which simply flattened the vessel, would not interrupt the circulation in such a trunk as the brachiocephalic.

Prof. Velpeau said that he was not positive on this point. There were some particulars in the operation which he did not distinctly understand. An examination of the parts could alone elucidate this question. Happily, this was impossible as the patient was living.

The conclusions of the report were then put to vote and adopted.

O.

5. *Radical cure of Hernia.* By M. Jobert (de Lamballe).

At a late meeting of the French Academy, M. Jobert presented an individual in whom he had obtained a radical cure of an inguinal hernia, by puncturing the sac and injecting tincture of iodine. The injection developed adhesive inflammation between the walls of the sac, and, by agglutination of the serous surfaces, produced the complete cure of the hernia. This is the fourth case in which M. Jobert has successfully operated by this method. *Gazette Médicale de Paris.* No. 13.

O.

6. *New Method of Puncturing the Bladder.* By Dr. Branden, St. Helius, Jersey.

At a late meeting of the Medical Society of London, Mr. Hancock described this method of operating for retention of urine.

It consisted of the perforation of the symphisis pubis by a hydrocele trochar, and the introduction of a flexible catheter through the tube into the bladder. Dr. Branden had so operated in 100 cases, and in each one had met with the bladder most readily. Mr. Hancock had not performed the operation on the living body, but on the dead subject had found it very simple and of easy performance. The proposition was not altogether a new one, since Dr. Branden had described it in 1838. The following advantages were claimed for this operation. 1st. The bladder being fixed by its attachments to this locality, whether healthy or diseased, it is always accessible to the operator. 2d.

There is no peritoneal covering at that point, and there is less danger of wounding other important parts. 3d. It is very applicable to corpulent patients, and where there is any displacement of the gut or uterine organs. 4th. It produces but very little pain, from the absence of nerves. 5th. The catheter will not be thrust away by the contraction of the coats of the bladder, neither will it slip into the bladder. 6th. It is applicable to all cases of retention of urine, from whatever cause and when other points of operation are not convenient. The body may also be placed so as to favour the escape of the urine.

7. *On the Reduction of the Luxation Outwards of the Patella.*

Uncomplicated dislocation of the patella is a rare lesion. M. Malgaigne has been able to collect only eleven cases of the luxation outwards, which, nevertheless, is the most common variety of this accident. The reduction of this displacement is sometimes extremely difficult. Sabatier once failed in affecting and had to have recourse to the experience of Boyer. These considerations impart some interest to a communication by Dr. Poulet in *l' Union Médicale* for March 11th, in which that surgeon describes a case of dislocation of the patella from violence, in which the most persevering efforts at reduction by the ordinary method (direct pressure) were unsuccessful. After several surgeons had failed to restore the patella to its normal position, M. Poulet finally succeeded in doing so by suddenly flexing the leg while firm pressure was made on the outer edge of the bone. Dr. Poulet terminates his paper by some very judicious reflections upon the utility of sudden forced flexions in different luxations; for example, in luxations of the thumb, humerus, and of the head of the femur into the obturator foramen. O.

OBSTETRICS, &c.

1. *Cancerous Affections of the Cervix Uteri.*

Dr. Robert Johns concludes a long and able paper, entitled *Practical Observations on Cauliflower Excresence, and other Cancerous Affections of the Os Uteri,* by appending the following interesting summary:

1st. That cancerous affections, when confined to the cervix uteri, are in many cases, successfully treated by removal.

2. That the only chance of preventing a return of the disease is to remove in a healthy part the cervix from which it grows.

3. That the best and most expeditious operation is amputation of the cervix in a part free from disease.

4. That as hæmorrhage is very likely to follow such an operation, a ligature ought to be thrown around the cervix, as high as possible, for 24 or 36 hours before amputation.

5. That cauliflower excrescence is a disease to which this treatment is very applicable, as it rarely, if ever, extends beyond the neck of the uterus, and as it is one of the forms of cancer which is least liable to return after the excision of the parts.

6. That amputation of the cervix, in hypertrophy and such like affections of this part, which are curable by simpler means, is not justifiable.

7. That extreme prostration alone, or enlarged superficial inguinal glands, ought not to be a bar to operation.

8. That as inflammation in many forms, is likely to follow this operation, an appropriate preventive treatment ought to be adopted.

9. That the use of the actual cautery expedites cicatrization after the removal of the cervix.

10. That as amenorrhœa and dysmenorrhœa are likely to follow on extensive ulceration of the os and cervix, and also when these parts have been removed, the uterine sound ought to be passed from time to time during cicatrization, and for some time afterwards.

11. With the view to correct the cancerous diathesis, the patient might be put under a course of treatment for some time previous to, and subsequent on the operation.

12. That a particular form of vertigo is a frequent symptom, and an important diagnostic of uterine disease.

13. That in all cases of suspicious vaginal discharge, manual examination, at least, ought to be employed.—*Dublin Quarterly Journal*, February, 1854.

2. *New Pessary.*

Dr. Churchill has introduced a new form of pessary, which acts by distending the vagina. It is made of rod gutta percha, about one-sixth of an inch in diameter, and forms an arch at the upper and lower extremity. The lower extremity is bent forward, so that a lateral view somewhat resembles the letter L, with the posterior angle rounded.

The upper arch is to be passed behind the os uteri, and the lower is seated on the anterior edge of the perineum.

The size of the instrument must be adapted to each patient.—*Dub. Quart. Jour.*, Feb. 1854.

3. *Uterus Bicornis—Twins—Impaction of the Placenta into the neck of the Uterus—Forcible Delivery and Recovery.* By M. Hohl.

A well marked case of bicorned uterus rarely is brought to the notice of the American profession. We therefore present to our readers the following report of M. Hohl, as found in the *Prager Vier-teljahrschr*:

A delicate woman aged 30, *enciente* for the second time, became subject to transitory hæmorrhages during the first three months of pregnancy. At the beginning of the seventh month, hæmorrhage returned again, and recurred in fourteen days. Both sides of the abdomen were convex and distended, but there was depression along the mesial line from the umbilicus to the pubis. Here percussion caused a tympanitic sound; on either side there was dullness. On examining the uterus through the abdominal parietes, it was found to be divided into two parts, an inch and a half above the symphisis pubis; the right being larger than the left. Both were convex externally, concave internally and with all the characters of the gravid uterus. The two cornua extended above the level of the umbilicus, and were sufficiently large for the hand to feel different parts of the fœtus. The vagina was normal; the neck of the uterus single; short, but larger than usual; it was about an inch wide. The two cornua could be felt opening into the cavity right and left. The orifice of the right cornu contained a placenta. Across the left cornu lay the other placenta. This, then, was a case of *twins in a bicorned uterus.* The hæmorrhage resulted from a detachment of one of the placentæ.

M. Hohl introduced the hand into the right uterus; delivered the child by the feet; the placenta following at once. He repeated the same experiment successfnlly on the opposite side. The two infants, weighing about three pounds each, died after a few inspirations. The mother, after having an attack of pleurisy, recovered.

The accuracy of the diagnosis was afterwards verified, both with the hand and the use of the uterine sound.

4. *On Herpes of the Vulva.* By Dr. Legendre.

Circumstances occasionally arise in which it is very desirable to establish a differential diagnosis between the ulcerations which succeed to simple herpes, and those which are the consequence of syphilitic contagion. Cases may occur, indeed, in which this distinction may be of the highest importance in a medico-legal point of view: thus, the crime of rape would be punished with greater severity if accompanied by infection, than if the ulcerations observed after its perpetration were only the results of violence exercised upon ulcerated herpetic surfaces.

In a late number of the *Archives générales de Médecine,* M. Legendre examines this subject at great length, and lays down the following points of distinction between herpetic ulcers and chancres. Herpetic ulcers may be distinguished from non-indurated primary chancres by the fact that they are superficial, and consist of erosions which never penetrate the entire thickness of the skin; chancres have a greyish cavity; herpetic ulcers are commonly numerous, and are grouped together after the fashion of the vesicles from which they originated. Moreover, vesicles are often found in their vicinity. Lastly, herpetic ulcerations are readily cured without mercury and are not inoculable.

O.

5. *Premature Labour Induced by the Ergot of Rye.* By Francis H. Ramsbotham. Medical Times and Gazette.

A New Method of Inducing Premature Delivery. By Scanzoni. Ges zu Wurtzburg.

Induction of Premature Labour by the Continuous Water Douche. Reports of the Dublin Obstetrical Society. Dr. E. B. Sinclair.

Nothing more strongly marks the fact that the human species is, generation by generation, straying far away from those laws laid down by nature for its guidance, and is submitting to a modification of its original functions brought on by an indulgence in false and vitiated habits of mind and body; nothing we say proves the truth of this proposition more forcibly than the frequency with which it becomes the duty of the accoucheur to produce abortion in the pregnant female, and the many ingenious methods by which this violation of the natural laws of labour may be safely and speedily induced.

When we notice woman in a savage or natural condition, before the artificial wants and habits of an advancing civilization have grafted diseased and deranged functional disorders upon her system, we find that the processes of menstruation, pregnancy and parturition are just as simply and easily performed as is the evacuation of the bladder or the rectum. A young Indian girl, for instance, at the age of fourteen probably, passes gently and almost insensibly into womanhood. The process of menstruation is unattended with pain or derangement, and all the varieties of disturbed uterine functions, which the sex in our civilized countries are so often victims to, are spared her. Ere long, the union between the sexes which is there unembarrassed by the many imaginary wants which now accompany such an event, takes place. Pregnancy ensues, which passes quietly through its stated period, and is followed by a delivery just as natural and simple as that of the cow or mare. How vast an alteration does civilization induce in these functions so essential to the continuance of our species, and how common is it that the science of the physician, and the mechanical skill of the obstetrician, has to be called into play, to accomplish this important operation.

As an evidence of the truth of our proposition, we have grouped together various new methods of inducing abortion in the pregnant female, which the various diseases appertaining to that condition in a vitiated subject, or more frequently still, the pelvic deformities which an irrational system of dress, of diet, and of careless education during infancy and childhood have made so common.

We will first notice fifty-five cases of premature labour recorded by Dr. Ramsbotham as having been induced by the ergot of rye administered in full doses every four or six hours until uterine contraction resulted. He proves that the ergot will not only increase the contractions of the womb during the process of labour, but that it has the power of originating the process of labour and eventually expelling the ovum.

Dr. Ramsbotham draws a parallel between these fifty-five cases and thirty-six cases of premature delivery incited by the common method of rupturing the membranes, and he arrives at these conclusions.

1st. That the secale cornutum taken persistently in drachm doses every four hours will, under almost all circumstances, bring on uterine action. 2dly. That the medicine in no one instance produced any bad effect, although many of the patients took more than twenty doses, and one case required sixty doses or about seven ounces of ergot to induce uterine contractions. 3dly. The comparison between the abortions produced by ergot and those consequent on rupture of the membranes proves, that more children will be saved by the former than the latter method. In the fifty-five cases by ergot thirty-three children were born alive, whilst in the thirty-six cases induced by rupturing the membranes, there were only fifteen children saved. The safety of the child may generally be measured by the length of time after the waters are discharged before delivery occurs. In the ergot cases this period averaged twenty-six hours, whilst in the cases induced by rupturing the membranes the average length of time was seventy-four hours. Dr. Ramsbotham declares his belief in the power of this drug to induce labour, per se, and we think he proves the fact very satisfactorily.

Another novel mode of bringing on labour pains has been proposed by Scauzoni. He argued that by exciting the mammary glands it would be found that uterine contractions would ensue. He reasoned thus from observing the active sympathy between the breasts and the uterus; as for instance the violent after pains brought on when the new-born infant is applied to the breast. Scauzoni made an experiment on a young woman, who, two years before, had been delivered by perforation, owing to a contraction of the pelvis. In the thirty-second week of utero-gestation caoutchouc sucking pumps were put on the nipples. During three days they were applied seven times, remaining on about two hours on each occasion. The neck of the uterus became shortened after the third application. Severe labour pain came on after the sixth, and after the seventh the child was born.

In another case Scauzoni was equally successful. The only thing to be feared is an inflammation of the breasts.

Lastly, we will notice the method of inducing abortion, suggested by the late Dr. Kiwisch von Rotterau; which has been successfully put into practice by Dr. Tyler Smith, in a case reported in the Lancet for October 1852, also by Dr. Lacy (Lancet, December 1852) and by Drs. Sinclair, Atthill, Shekleton, and others of the Dublin school of medicine. The method as suggested by Kiwisch was to throw a continuous stream of water against the os uteri until some three or four gallons had been injected; and repeat at proper intervals. Dr. Tyler Smith injected alternately cold and warm water, carrying out the theory of Marshall Hall that the alternatives of temperature were necessary to excite full reflex action. In his case labour followed after the fourth application. Dr. Arnette of Vienna states that, averaging the cases in continental practice, it has been found that twelve douches have been necessary to excite labour.

The rationale of the process seems to be this; the action of the douche differs from the first stage of labour only in this fact, that the mechanical force is applied from without, and that the waters impelled against the os by external force, have not a membrane surrounding them, and in consequence of not being thus confined, not only is the aid of an adaptable wedge secured, but also the membranes are gradually detached from the cervix. These forces are much increased by confining the water as much as possible in the vagina, thereby distending that canal, whose walls from their attachment to the cervix uteri, must exert some influence by tension from their points of attachment, towards inducing dilatation.

TOXICOLOGY &c.

1. *On the Venom of Serpents.* By J. Gilman, A. M., M. D., LL. D.

During a sojourn of two or three months in the interior of Arkansas, Dr. Gilman instituted a series of experiments on the various poisonous reptiles, with which that country abounds, and we design giving our readers the result of his experiments.

Dr. Gilman found, in that country four varieties of the rattlesnake (*Crotalus;*) one of them the *Crotalus Horridus*, being the largest serpent in North America: The family of moccasin snakes (*Colluber*) is also a numerous one, there being not less than ten varieties, most of which are quite as venomous as the rattlesnake.

The anatomical structure of the poisonous apparatus is similar in all the different varieties of venomous serpents. It consists of a strong frame work of bone, with appropriate muscles, resembling a pair of jaws, but externally to the jaws proper and much stronger. One or more fangs just at the verge of the mouth are attached to these by a ginglymoid articulation; these fangs are capable of being erected at pleasure, they are sharp and crooked, shaped like the claws of the cat; hooked backwards, and with a hollow from the base to near the point. Sometimes this cavity is divided by a thin layer of bone, making thus two canals. At the base of these fangs, is found a small sac containing two or three drops of venom, resembling thin honey. A slight upward pressure forces this poison through the canal, and it makes its exit by a small opening at the point with considerable force. The fangs when not erected, lay like a knife blade between the two jaws, where they are covered by a membrane which encloses them like a sheath, this is the *Vagina Dentis.* These fangs are frequently shed to make room for others still larger; Dr. Gilman found in a large crotalus horridus, five fangs on each side in different stages of formation.

By the administration of chloroform these snakes were easily robbed of their venom; whilst under its influence they were carefully seized by the neck and the vagina dentis being held out of the way by an assistant, the fangs were gently pressed upward, when the venom would issue from the point, and be caught in a vial or on the point of a lancet. After depriving several serpents of their venom in this way, they were found after two days to be as highly charged as ever with poison.

Dr. Gilman found that plants inoculated with this venom introduced on the point of a lancet would in a short time wither and die as if blasted by lightning. A solution of it in *alcohol at once deprived it of its poisonous qualities;* but mixed with aqua ammonia, spirits turpentine; or with nitric or sulphuric acid, it acted with undiminished vigor.

The following experiment proves the power of fascination possessed by these reptiles. There were seven venomous serpents belonging to five different species, dwelling amicably in one den. A pair of king-snakes, which were fangless and consequently without venom, were introduced into this den. The next morning four of the venomous snakes were found destroyed by the king-snakes, one still within their coils and the two remaining ones seemed to be unable to make any effort at self-defence. A large rattlesnake could not be roused in any way, or give warning even with his rattles, but remained stupid and indifferent to his fate.

After a great number of experiments, Dr. Gilman draws the following conclusions.

1st. That the venom of all serpents acts as a poison in a similar manner.

2nd. That the venom of some varieties is far more active than others.

3rd. That a variety of the *Colluber*, known as the cotton mouth, is the most venomous snake in Arkansas.

4th. That this venom destroys all forms of organic life, whether *animal* or *vegetable.*

5th. That *alcohol*, if brought in contact with the venom *acts* as an *antidote* to a certain extent.

6th. That serpents possess the power of fascination which may be compared with that of mesmerism.

7th. That the blood of animals poisoned by the venom of snakes bears a close resemblance to that of animals killed by lightning or hydrocyanic acid. It loses its power of coagulation and cannot be long kept from putrefaction.—*St. Louis Med. and Surg. Journal.*

2. *Death from Chloroform.*

We read in the *Association Medical Journal*, for April 7th, of the following case of death from the administration of chloroform.

Mrs. Harrop, aged 45, a resident of Sheffield, had been afflicted for three years, with a cancerous tumour of the left breast. The medical men who were consulted, advised the extirpation of the mamma. Early in March, Dr. Daw and Messrs. Lewis and Wright, surgeons, undertook this operation. Dr. Law administered chloroform. Inhalation from a sponge was continued for about twenty minutes, when the usual effects of the vapour began to manifest themselves. The pulse had fallen from 136 to 104; low, muttering delirium presently came on, but ceased in a few minutes. Mr. Wright was about to commence his incisions, when Dr. Law, observing an alarming change in the patient's countenance, cried, "Stop? how is the pulse?" Mr. Lewis replied, "It is gone." The windows were thrown open; the tongue was drawn out of the mouth, ammonia was administered, and artificial respiration was practised, but the heart had ceased to beat, and, after a few laboured inspirations, life was extinct. About an ounce of chloroform had been administered. The room in which the patient died was large and airy, and the door was open.

At the autopsy, the heart and lungs were found to be healthy; the latter were somewhat congested. Both the liver and kidneys were in a state of flabby degeneration.

A coroner's jury exonerated the medical men from blame. Some questions were asked in regard to the propriety of using so large an amount of chloroform, but it was proved, by reference to Christison's *Dispensatory*, that Dr. Simpson had administered *eight ounces* of chloroform in thirteen hours.

3. *Death following the Administration of Chloroform.*

The following instance of the fatal effects of chloroform occurred at the Bristol Royal Infirmary, and is related in detail in the *Association Medical Journal,* for February 4th.

Jane Morgan, æt. 59, was placed under the influence of chloroform previous to attempts at reduction of a luxation of the head of the humerus of eight weeks standing. Nothing in the patient's general condition, or in the state of the thoracic organs seemed to forbid the induction of anæsthesia. It was afterwards learned that the patient was subject to syncope.

The patient commenced the inhalation of one drachm of chloroform from a cup-shaped sponge, at 2 P. M. Nothing unusual occurred. In about five minutes, another drachm was poured on the sponge. The respiration became stertorous almost immediately; after a moment it ceased, and the pulse became imperceptible at the same time. The pupils were not dilated.

Cold water, cold air, galvanism, artificial respiration through an artificial opening in the trachea, were all promptly employed without avail, a few convulsive movements of the muscles having been their only results.

The post-mortem examination revealed extreme pulmonary congestion; the cavities of the heart were nearly empty. The blood fluid.

The coronary arteries were studded with atheromatous deposits; the muscular structure of the heart was pale, and appeared to have undergone fatty degeneration in several places. The other organs presented nothing abnormal.

THERAPEUTICAL RECORD.

Aconite Liniment.—Macerate four ounces of powdered aconite root in half a pint of alcohol, for twenty-four hours; then pack it in a displacer, and add alcohol gradually until a pint of tincture has passed. Distil off twelve fluid ounces, and evaporate the residue until it measures twelve fluid drachms. To this add two fluid drachms each of alcohol and glycerin, and mix them. It is used as an external anæsthetic application in the following manner. Cut a piece of lint or muslin of the size and form of the part to be treated, lay it on a plate or waiter, and by means of a camel's-hair brush saturate it with the liniment. This may be applied to the surface, with a piece of oiled silk laid over it, to prevent evaporation, It should not be applied to an abraded surface, and the patient should be cautioned in reference to its poisonous character.—*Journal of Pharmacy.*

Anasraca.—In the dropsy which supervenes upon scarlatina, Prof. Mauthner, of Vienna, (*Journal für Kinderkrankheiten*) employs with success, urea, or else the nitrate of urea, as a powerful diuretic. The dose of this remedy is the third of a grain, given in powder with sugar, every two hours.

Burns.—The use of collodion in burns is highly lauded by Blumhardt, *Wertemburg Corresp.*, as promoting healing and preventing suppuration. It should be applied to the skin by a camel's hair pencil. He considers the collodion to act beneficially in two ways: First, by affording a protective covering to the exposed cutis, and second, by giving a uniform support to the part, and relieving the capillaries from all undue distention.

Cure of Itch.—Take finely powdered brick dust and rub the body well with it, so as to expose the *acari* to the sulphur ointment, which is then to be carefully applied; the friction to be kept up for half an hour. After this the patient is subjected to a good ablution of soap and water. The whole time occupied by this proceeding is less than an hour and a half. A perfect cure will be the result.

Gleet.—The "Rep. de Pharmacie" recommends the following prescription as being useful in gleets of long standing. ℞. Pulv. secale cornut, ʒj.; Ferri sulp., gr. j.; camphoræ, vanillæ aa gr. ss. M. et to divida in chart., No. xx. One to be taken morning and evening.—*Boston Medical and Surgical Journal.*

Gastric Irritation.—The following formula is intended to represent the pulvis doveri in those cases where it is difficult to administer the latter, owing to an irritable condition of the gastric organ :

℞. Morph. acet., ʒj.
Acid acet. dilut., ℥j.
Ft. Solutio, et adde.
Alcohol dilut., ℥vij.
Vinum ipecac, ℥ij. M.

Ten minims of the above preparation are equal to one-eighth of a grain of acetate of morphia, and one-eighth of a grain of ipecacuanha, and fourteen minims are equal to a grain of opium.—*Jour. of Pharmacy.*

Hiccough.—This vexatious affection frequently defies every domestic and even every scientific remedy. After sugar and water have failed, Rayer advises that the pharynx should be touched with a pencil dipped in liquor ammonia. On the continent it is common to administer syrup of currants, or the vinegar of beer; different etherial preparations, and Hoffman's anodyne liquor especially, are relied on by many physicians; some authors advise chloroform in potion and even in inhalation. All of these methods are successful sometimes, and sometimes fail. Dr. Ossieur states, in the *Ann. Med. de Roulers*, that having treated a case of hiccough, which had lasted for eight days, with the remedies we have enumerated, without success, he finally checked it by administering fifteen drops of aromatic sulphuric acid, with forty-five drops of currant syrup in three tablespoonfuls of water, every half hour.

Pityriasis of the Scalp or Dandriff.—In two cases of this disease of the scalp occurring in patients in the Middlesex Hospital, glycerine was found effectual in clearing away branny scales from among the hair. It is used as a hair oil, once or twice a week. Mr. Shaw, (*Med. Times and Gazette*,) states that he has often used it with great success.

Purpura Hæmorrhagica.—Dr. George Willis (*Edinburgh Monthly Journal*) reports a case of purpura which was promptly cured by the administration of oil of turpentine. This case corroborates the opinion of Neiligan in respect to the efficacy of terebinthinate preparations in this disease, which has been advocated by Dr. Patterson, in the March number of this Journal. (See vol. ii, p. 483, *et seq.*)

Rheumatism.—Our readers may be fond of new remedies, and to gratify their desires in this respect, we present them with the following formula, suggested by M. Blanco Y. Millan. *Rev. Therap. du Midi*:

Take a pound of earth worms, clean them without washing them; put them into a glass bottle well corked at the moment of fermentation, bury it in the ground, and at the end of twenty-four hours, the worms are converted into a turbid liquid of a strong, earthy and disagreeable odour. Soak some clothes in this fluid, and apply them upon the painful part, covering them with warm tracing paper.

Rheumatism.—We recommend to our readers the following prescription for the cure of this most unmanageable disease.

℞. Liq. potassæ, qtt. xv.
Potass. Iodidi, grs. ij.
Mucil. acaciæ, ʒj.
Aq. distill., ʒxi. M. ft. haust.

℞. Potass. iodidi, ℈ij.
Morph. muriat., ℈ss.
Ung. cetacei, ℥iss. Ft. ung.

℞. Opii. purif., gr. j.
Extr. colch. acet. grs. ij.
Pulv. scam. co., grs. iij. M. ft. pil. ij.

The ointment to be applied to each joint, as it becomes affected. The draught to be taken three times a day, and the two pills administered at night.

Strabismus.—Du Bois Reymond (*Müller's Archiv.*) recommends the *steroscope* for the cure of squinting. The principle is the same as in the case of the prismatic spectacles advised by Mr. Wells.

Syphilitic Eruptions.—Mr. Simon is accustomed to employ in the wards of St. Thomas's, for the cure of tubercular syphilitic eruptions, the application once daily, of a small portion of unguent. hydr. mite to every spot, in addition to the ordinary constitutional measures.

Tænia.—Dr. McKinnon (*Indian Annals of Med. Sci.*, 1, p. 284) has employed a remedy in tape-worm which is used in India as a vermifuge for dogs, under the name "kameyla." This drug is a powder attached to the fruit-capsule of the *rothera tinctoria*, an euphorbiaceous plant. This powder is brushed off and collected when the fruit is dry. Its price is moderate. Dr. McKinnon has given it in doses of two or three drachms in 16 cases, and finds it more effectual than kousso or turpentine.

Venereal Ulcers.—The use of iodide of zinc in venereal affections is highly recommended by Dr. Sewell, of Canada, in the *Montreal Medical Chronicle.* In venereal ulcerations of the throat and nose, it was found effectual, after the disease had resisted the use of the acid pernitrate of mercury. To apply it, twist a little cotton wool round the point of a wooden skewer, and having dipped it in the caustic apply it to the ulcer. One application usually suffices to destroy the morbid action, and is to be followed up with the metallic washes for the throat, and dilute citrine ointment for the nose.

BIBLIOGRAPHICAL RECORD.

I. *The Pathology and Treatment of Pulmonary Tuberculosis, and on the Local Medication of Pharyngeal and Laryngeal Diseases, &c., &c.* By JOHN HUGHES BENNETT, M. D., &c.

When the horticulturist observes that his plant is unthrifty—that it begins to droop and wither, he does not drug it, but straightway sets about examining into the causes of its decay. He takes into consideration the state of the surrounding atmosphere, turns up its soil, and searches every where, and in every way, to find out how he can administer to its proper nourishment. Defective nutrition is his leading idea, and its remedy simply by appropriate aliment, so to speak, is his leading principle in all efforts at renovation.

It was a long time before this simple principle became developed, so as to stand out as a distinct law, to guide us in medical practice in certain cases. When the idea was abandoned that the mere search for remedies in the way of drugs, was the grand object and the end of medical culture, a great step was taken.

The author of the work under consideration claims, not without good reason we believe, to have introduced the use of cod liver oil to the notice of the British medical public in the treatment of tubercular phthisis, and other forms of cachexia. However this may be, it is our decided conviction that the advent of that remedy, from its universal employment in this country, as well as elsewhere, has served more than any previous step in the progress of the science, to settle and make manifest the principle in the treatment of disease, of which we have just spoken. And it has done this, because it carried the simple tenets, upon which its remedial power was supposed to depend, abroad; scattering the principle, far and wide, among the great body of practitioners, many of whom, from early education were embued with views of the diseases in question, directly its reverse. Admitting that the remedy has not fulfilled its early promise, which we are far from believing, the accomplishment of this much was a great work.

It led to the abandonment of a system of mischievous medication, which, even in our day we have seen employed in phthisis; it caused men whose therapeutical rules, in their belief had long been inalterably settled, to pause and ponder. And although to such, the new remedy may not have answered their expectations, still its adoption led to their advancement and promoted their usefulness, for, as it has been sagely remarked, the abandonment of an old error is always equal to the attainment of a new truth. It is true in the schools, and among men whose opportunities had been such as to enable them to keep pace with the science, no such thing was required for this purpose. Already had the medical mind been brought to the same point by the clearer insight which modern science, had given into the real nature of phthisis and its allied affections. The careful study of its natural history, pursued with the aid of physical diagnosis, had, to all such, disclosed its true character too plainly to admit of doubt that, but little was to be expected from any system of medication founded upon pre-existing therapeutical laws. It would be interesting, did our space admit of it, to trace the history of this progression. When Sir James Clarke pointed out the relationship between phthisis and derangements of the prima via, although the views which he held viz: that the former disease was but the result of the latter affection, were erroneous, he exposed a mine, the subsequent working of which has yielded splendid results.

Through these means we have arrived at a knowledge of the fact that phthisis is a constitutional disease, and furthermore, that a failure in the nutritive forces of the system is the most prominent element in this vitiation.

The settlement of these questions, at once developed the true indications for the treatment and they were promptly enforced.

All the general measures which were thus suggested, as change of air, outdoor exercise, nourishing diet, &c. &c., came into use, but with regard to a settled course of internal medication, it must be conceded that the best men were literally laying on their oars. It was under these circumstances that the new remedy was suggested. It was precisely in the proper line of treatment;—was found useful, and hence as we have said its almost universal trial in the disease.

Although in another place it is our design to speak briefly with regard to the value and use of cod liver oil in consumption, we cannot refrain from dwelling here for a moment on the interesting feature which is presented by its history. It opens a new field to the therapeutical student. In the early history of medicine, agents antagonistic to the organism, which acted by violent perturbations received the most attention. The one under consideration has the reverse action, it chimes in with the normal processes of the system, and promotes their activity in a perfectly natural manner. We have here then a new class of agents in the treatment of disease; which we think, when the laws necessary to regulate the employment of such measures, shall be thoroughly understood, promises to be of immense value. It is not our design to go into anything like a critical analysis of Dr. Bennett's work. The field it is true, is sufficiently inviting, but our space is too limited for the undertaking. The main object which we have at this time is to call attention to the work, as being an enthusiastic exponent of the views of modern observers with regard to the diseases of which it treats; written out in a very agreeable manner. Many of the author's opinions we may remark, particularly those with regard to the histology of tubercle, do not accord with those which we have been led to adopt, and, therefore, for this reason we do not share, to its full extent, his belief in the curability of developed pulmonary tuberculosis.

Still, on account of the general tenor of the work in relation to the nature of consumption, and because of the great practical truths which it inculcates with regard to its general treatment, we should be glad to know that it had fallen into the hands of our brethren, generally in this section.

Our literature on the whole subject of phthisis has undergone a thorough change within even the last few years, and such works as this are demanded to keep the great body of practitioners fully informed of these changes. In most of the cities, the practice in thoracic diseases, has fallen into the hands of junior members of the profession. The reason of it is very plain, they are up to the standard of modern improvement in the diagnosis and treatment of such affections, and the advantage which this gives them is too apparent to escape public observation, obtuse as it is on many points with regard to medical practice.

There are many prevailing errors with regard to phthisis which we would like to see abolished, and a careful perusal of the work under consideration, would affect this object.

Vague ideas prevail with regard to the origin of the disease. It appears to be a difficult thing for many to recognise it as an independent affection. The belief is not uncommon that phthisis may be the result of some antecedent affection—usually some disorder of the hepatic function, which is susceptible of remedy by the timely and faithful application of appropriate measures.

We would like to see such heresies abandoned—we want the profession to come fairly to this point—to be in the way of recognizing this disease at its onset, and to assert its independent existence, even though they have staring in their faces the mournful truth that they are powerless in its treatment. We have often thought when we have seen our patients clinging to the idea that after all the mischief lay in the liver and its appendages, and ought to be easily remedied, that a spirit of benevolence had dictated the false impression which had been made on their minds.

But this course is not excusable, it is attended by evils too apparent to dwell upon. Not so much to the false system of unnecessary and always pernicious medication which it inculcates is it most objectionable—its greatest source of mischief arises from the diversion, which it creates from the true line of treating the disease, and the application of remedies likely to be useful. One of these latter is the cod liver oil, and we shall conclude our notice by offering a few remarks on this article.

It corresponds with our observation that the belief in the efficacy of cod liver oil in consumption, and the practical knowledge of the science of physical diagnosis of the diseases of the chest go together. We have never seen an experienced auscultator who did not recommend the remedy. The reason for this is, to us, very obvious.

He recognizes the disease in its incipiency, and hence employs the remedy at a time when it can do good.

We hear every day that cod liver oil is of no value in phthisis. We believe this opinion grows out of the fact that it is never administered in time. When the existence of consumption becomes evident to bystanders, the case is usually too far progressed—the lungs are too much damaged—the recuperative energies of the system are too nearly lost, for us to expect benefit from this or any other remedy. That it has power to arrest phthisis, we, in common with the author, have had the most unmistakable evidence. Whether it will do more than merely stay its progress, we cannot, from our experience, affirm; but we would earnestly direct the attention of the profession to the cases mentioned in the work. There are others in the records of the science, but none, we believe, that have been so searchingly scanned as Dr. Bennett's cases. That the remedy has power to arrest its symptoms and hold the disease at bay, the following case will, we think, give ample proof.

Our patient was a lady aged 23. In early life she had had scrofula, but after puberty, her health became perfect, and she was admirably developed. We found her emaciated, by actual weight, to the extent of 30 pounds.

She had daily exacerbations of fever, with profuse night sweats. She was without expectoration and had no decided cough, unless upon exertion, when she would have a short, quick cough, but there was a constant desire to clear the throat. Her voice was unaltered. Upon examination, the whole of the upper third of the left lung was found consolidated, but nothing more. There was marked dullness upon percussion, loud bronchial respiration, but no evidence further indicating that the lung had anywhere began to break up. She was feeble, and had to spend most of her time in bed. She was put upon full doses of cod liver oil, which she bore admirably. In three weeks, she had lost her fevers and sweats, in six more she had recovered her usual weight, within ten pounds, making 20 pounds which she had gained. It was early in January when we first saw her, and during the next ten months, she was under our observation. In two months, she resumed her usual habits, and we used to meet her in the street frequently looking in perfect health. Her chest was examined late in October of the same year. There was no alteration in the physical signs—she still had the same disposition to dry cough upon exertion, and there was a constant effort to clear the throat. With these exceptions, she appeared well and cheerful.

Soon after this examination she was induced to change her course. To use her own expression, she had forgotten how much cod liver oil had done for her, and had begun to think, that after all, she had no consumption, and that but for the state of the throat, she would be well. From this time, she passed into other hands, the cod liver oil was abandoned, topical treatment was applied to the throat, and a course of alteratives employed. Early in January following, we were again invited to see her. We found her propped up in her bed, wasted to the last degree, with a spittoon before her half filled with pus. On applying the ear to the chest, we found that a large cavern existed, where, two months before, the lung was only consolidated.

She lived three weeks more, asserting to the last her belief, that had she not abandoned our treatment, she would still have remained as we left her.

This whole subject is full of interest. The cause of humanity demands that every one who takes upon himself the practice of our art, should look well into this matter. For ourselves, the work of Dr. Bennett has some peculiar attractions. He comes before the world with a bolder assertion with regard to the curability of phthisis, than has been employed for a long time, by any man of equal standing in the profession. We want our readers to examine the work for themselves.

As stated, our present design is only to direct attention to it, and we trust we have succeeded. Hereafter, we intend to notice more particularly its contents,—to go into an analysis of his views, comparing them with those to be found in other works, which have been recently published on the same subject. At that time, we expect to notice the concluding portion of the book, which treats of pharyngeal and laryngeal diseases, simulating phthisis. P.

II. *Lectures on the Diseases of Infancy and Childhood.* By CHARLES WEST, M. D. Second American from the second London edition. Blanchard & Lea. Received through G. M. West & Bro.

The favorable reception which this work has met with at the hands of both the English and American profession, is evidenced by the fact that a second edition in both countries has been called for. In truth, the book has about it that practical common-sense character which is always acceptable to the practitioner of medicine; whilst the immense experience of Dr. West, derived from his connexion with the London Hospital for Sick Children, gives to him opportunities for the minute observation of the diseases incident to childhood, such as no private practice can offer.

We would especially recommend the careful study of these lectures to the medical student who is preparing himself for the general practice. He will find on entering upon the duties of his profession, that at least one-third of his patients will be children; and he will be astonished to find how often he will be confused and at fault in his endeavors to treat with success the many diseases to which infancy is subject. Not only does he find all the rules laid down by his authorities utterly inefficient to guide him in his diagnosis; but he must also learn to modify his therapeutics and adapt his remedies, in a manner he little dreams of, until he is called upon by the most urgent necessities of disease to have his tact and presence of mind tested to the utmost.

It is owing to the want of this special attention to the disorders of childhood that we see so many of the profession who are otherwise masters of the science, and yet to whom this large class of ailments are almost as a sealed book. As Dr. West, with great correctness declares to his class, "It is not mere hyperbole to say, that you have to study a new semeiology, to learn a new pathology and new therapeutics." Indeed, we would recommend the whole of his introductory lecture from which this short extract is taken, to the careful perusal of every young medical man. It is a faithful sketch of the difficulties to be surmounted, and the tact and adroitness required, in order to grapple successfully with the many varieties of children's diseases; and we will also add, that there is nothing which so certainly leads the practitioner of physic to reputation and profitable employment as this knowledge, the necessity for which we have thus urged. M.

III. *Transactions of the Medical Association of the State of Alabama.* Seventh annual session.

We are glad to see from this report, that the associated profession of Alabama are working actively and in the right direction;—are striving to add something to the common fund of medical science; and we heartily wish them Godspeed in this laudable undertaking.

The Association numbers one hundred and fifty members, although there were few present at this meeting. Still the number of scientific contributions are very creditable, both in quantity and quality. We notice, besides the president's address, and the annual oration delivered by Dr. Lopez of Mobile, that there were sixteen papers read before the society; chiefly reports on the diseases of various portions of the state.

IV. *Essay on the Mechanism and Management of Parturition in the Shoulder Presentation.* By Wm. M. Boling, M. D., Montgomery, Alabama. (From the author.)

Our southern brethren are breaking through the long silence which the profession for so many years has maintained, and begin to venture before the public on suitable occasions, and bring their various contributions to the art of medicine in all its departments.

We will cite the monograph of Dr. Boling on shoulder presentation as an evidence of the correctness of our statement. It is a very good compendium of the whole subject, collected from sources not within the reach of all, and we think is calculated to interest and instruct the profession.

We would also call attention to the typography of this pamphlet. It shews that we can get work of this sort as well, if not better done, at home than in the northern cities, and as we are struggling to build up a southern literature, let us throw our whole influence and patronage upon our southern printers. The success of one will be the success of both.

EDITORIAL AND MISCELLANEOUS.

In assuming his present position, the new Editor begs to say that he has not undertaken the task without due reflection, with regard to its labours and responsibilities. The post, it is needless to say, involves much that is undesirable, but it will give him a good opportunity to work to advantage in a cause to which he has long felt devotion.

Its acceptance has been prompted by an earnest desire to promote the true interests of the profession in this State, to develope a southern medical literature, and to aid and perpetuate southern medical institutions. The field is ample—the object, all must concede praiseworthy; he feels, therefore, that any new labourer can but be welcomed. With regard to his policy in the conduct of the Journal, it will not differ from that pursued by his predecessor. The advancement of science shall be its leading object,—the promotion of the best interests of the profession its most cherished purpose. All efforts, from whatever source they may spring, tending to those ends, shall be welcomed and chronicled in its pages, whilst all movements or opinions likely to interfere with their attainment, shall be fearlessly exposed and denounced.

Governed in this way, he hopes, by industry and a faithful attention to what he conceives to be the wants of the profession, to bring to his associate such aid as will be required to maintain the Journal in that high position which it assumed from its beginning; and he trusts that by enlisting in its behalf many new contributors, to give that value to its original department, which cannot fail to excite the interest and appreciation of the medical public. P.

MEDICAL COLLEGE OF VIRGINIA.

Election of Professors.

On the 25th of May, the Visiters appointed by the State legislature for the governance of this institution, met in this city to fill the vacancy in the chair of Materia Medica, occasioned by the death of Dr. Lewis W. Chamberlayne, and also to make a selection for the newly created professorship of Institutes of Medicine and Medical Jurisprudence, deemed necesary by the incumbent Faculty in order to give complete efficiency to their school.

Fourteen members of this Board were present, representing almost every section of the State, from the extreme east to the mountains. Every inducement had been offered to the profession and every facility given to those who might desire to become competitors for the honors in their gift. The consequence was that there were not less than seventeen applicants for the two vacancies; comprising members of the profession from New York to Texas. The propriety of the legislative action of the last winter in making this a State institution, and giving it a governing power free from prejudices, and unbiassed by personal interests, is effectually proved by this animated contest. The profession feels that the success of the College is certain, and that its honors are worth striving for. The profession recognizes the impartiality and high personal character of the Board of Visiters, and is willing to submit its claims for these important positions to their judgment.

We do not think that this confidence has been misplaced. Dr. **BEVERLY R. WELLFORD**, of Fredericksburg, was selected to fill the chair of Materia Medica, and M. **BROWN SEQUARD** was chosen professor of the Institutes of Medicine, &c.

Dr. Wellford brings with him the confidence and respect of the community in which he lived: Of mature age and ripe experience, we believe that he will do justice to the position he has attained. Dr. Wellford is also widely known beyond the limits of the State, and can probably do as much as any member of the Virginia profession to attract students from abroad to our school. As President of the State Medical Convention and Medical Society of Virginia, and afterwards selected as the presiding officer of the American Medical Association, he has had the opportunity to shew his capabilities as a speaker and writer. His long experience in the treatment of the diseases of the south admirably fit him for the post which he holds.

M. Brown Séquard is not probably as well known to the medical men of our State; but we are well satisfied that there is not one of the candidates for the physiological chair, (if he is familiar with the science which he was anxious to teach,) who can dispute the propriety of the appointment. This department of medicine has had new and brilliant light thrown upon it by the indefatigable researches of this gentleman. In the great field of experimental physiology, M. Séquard and his celebrated co-labourer and rival, M. Claude Bernard, have gained equal reputation. M. Bernard, in reward for his investigations, has recently been appointed to the new chair of general physiology in the Faculty of Sciences at Paris. What more fitting compliment could we pay Dr. Séquard, American as he is on the maternal side, and desirous of giving to this country the fruits of his future researches, than to select him for this position in our own College, for whose prosperity the Virginia profession should earnestly labour, and which we hope to see worthy of the State which has given it birth.

AMERICAN MEDICAL ASSOCIATION.

PROCEEDINGS OF THE SEVENTH ANNUAL MEETING, HELD IN ST. LOUIS, MISSOURI, MAY 2d, 1854.

In the morning at 11 o'clock the Association convened in Verandah Hall.

In the absence of the President, Dr. Jonathan Knight, of Connecticut, Dr. Usher Parsons of Rhode Island—the senior Vice-President—called the Convention to order, and announced that the Vice-Presidents and Ex-Presidents were entitled by courtesy to seats on the platform. Doctor Edwin S. Lemoine, of St. Louis took his seat as Secretary.

Letters were read from the President, Dr. Knight, of Connecticut, and Dr. Beadle, senior Secretary, regretting that they could not be present at the meeting; also a letter from Dr. Adams, stating that he had presented the sixth volume of the Transactions to the Imperial Academy of Medicine at Paris, which had been favorably received and referred to a committee; M. Velpeau, chairman.

Dr. James R. Washington, of St. Louis, chairman of the Committee of Arrangements, then welcomed the Association to St. Louis. Dr. Parsons, the Senior Vice-President, answered as follows:

> Gentlemen of the Committee of Arrangements, I thank you in the name of the Association, for the kind welcome which you have been pleased to extend us. We have looked forward with great interest to this occasion, and to the opportunity we now have of taking our brethren of St. Louis by the hand, and in greeting you. Our road has been long, but we have been repaid by beautiful views, and a sight of your flourishing City. We are happy to take you by the hand, and greet you for

the purpose of co-operating with you in the advancement of the objects of our Association.

The roll of Delegates was then called, and two hundred and forty-two members were declared to be present. We regret to see that Virginia had but one representative present, Dr. Adam Spitler. There were sixty from Missouri; and the western States generally were well represented.

Reports of committees were now read, and afterwards the committee on nominations was chosen. On motion of Dr. Atlee, of Pa., the hours of session were fixed at from 9 A. M. to 1 P. M., and from 3 to 6 o'clock, P. M.

Dr. Hooker, of Connecticut moved that the Nominating Committee should select the the next place of meeting; which was approved. Invitations were received from Detroit and Philadelphia.

Dr. Brainerd, of Illinois, offered the following resolution:

Resolved, That hereafter the American Medical Association will hold its meetings alternately in the southern, northern, and western divisions of the United States. The resolution gave rise to considerable discussion, and was finally, on motion of Dr. Barnes, of St Louis, laid on the table.

On motion, the meeting adjourned to meet at 3 o'clock, P. M.

AFTERNOON SESSION.—*Tuesday, May 2d.*

In the absence of the President, Dr. Knight, the senior Vice-President, Dr. Parsons of Rhode Island, read an address.

The New York Committee, after adopting sundry resolutions expressive of their feelings with respect to the disaster at Norwalk, which resulted in the death of so many members of the Association, recommended that a narrative of the event, together with a biographical sketch of each individual, should be prepared and published in the next volume of the Transactions.

Dr. Gross moved that the election of officers should hereafter take place immediately before the adjournment, instead of directly after the commencement of each meeting.

Dr. Gross offered another resolution, declaring it to be disorderly for any future Committee of arrangements to prepare a costly supper or dinner, for the entertainment of the members of the Association. Dr. Gross remarked in support of the resolution, that he had the misfortune, perhaps, to live in a small city, where the profession was poor, and unable to go to any extravagant expenditure in the entertainment of the Association, in case it should ever honor his city by holding its meetings there. His resolution, he further said, was prospective in its application, and intended to make no reflection on any arrangements that had been made by the profession of this city.

A warm and spirited debate sprung up on the resolution, in which Drs. Coons, McPheeters and Barnes participated.

Dr. Coons approved of the resolution, and the objects it was intended to effect. The cause of science could not be promoted by preparing costly dinners at great expense. The Committee of arrangements in this city, have been at great expense and trouble to make preparations for the reception of the Association, and he thought such efforts and receptions did not tend greatly to forward the ends of the Association. (These remarks elicited some decided evidences of disapprobation.)

Dr. McPheeters deprecated the expediency of dragging such matters before the Association.

A motion to lay the resolûtion on the table was lost.

An amendment was then offered by Dr. McPheeters, striking out the word "disorderly," and substituting a clause, which modified the resolution, so as to request future Committees of arrangement not to prepare costly entertainments for the Association.

Dr. McIlvaine desired to amend further by a clause prohibiting the use of liquor and tobacco. After some further discussion, Dr. Gross' resolution, with Dr. McPheeters' amendment was carried.

The following officers were elected for the ensuing year:

For President—Charles A. Pope, of Missouri. *Vice-Presidents*—E. D. Fenner, of Louisiana; N. S. Davis, of Illinois; William Wragg, of South Carolina; John Green, of Massachusetts. *Secretaries*—Edwin S. Lemoine, of Missouri; Francis West, of Pennsylvania. *Treasurer*—D. Francis Condie, of Pennsylvania.

A resolution was passed fixing the annual assessment at three dollars, and making it the duty of the Secretary to strike out the name of any member who did not pay his dues after being notified of his indebtedness.

Dr. Atlee, on behalf of the Committee to procure a stone with a suitable inscription for the Washington monument, reported that he had adopted, at the suggestion of the lamented Dr. Pierson, of Salem, the design for the stone, representing Hippocrates refusing the presents of King Artaxerxes, who invited him to go to Persia and succor the enemies of Greece. The sculpture was on beautiful marble, by Samuel Beck, a young artist of Lancaster County, Pennsylvania, from a daguerreotype copy of Viardot's celebrated picture, presented to him by Miss Abby L. Pierson. The execution of the work is in the highest style of the art and evinces extraordinary talents in the artist.

The stone is of Vermont marble. The resolution authorizing the movement was adopted at Richmond. There was a lack of funds for the accomplishment of this object to the amount of $400, and members of the Association were respectfully invited to contribute, as they felt inclined, and make up the amount.

Dr. Pope, the President elect, being now present, was conducted to the Chair, and addressed the Association as follows:

GENTLEMEN—There are occasions when the mouth is dumb, because the heart is full. I am unequal to the task of thanks. Honor, which is valuable according to its source, is in the present case great indeed, for I behold around me the members of a noble profession, the cultivators of a yet nobler science, gathered from the wide extent of our beloved country.

I would that this undeserved and unexpected honor had fallen upon one older and worthier than I, for many such I see before me. In one thing only will I claim equality, for however unworthy in other respects, I yield to none in ardent devotion and ceaseless love to our time honored art. But I will not claim more than I ought. Nor do I misconstrue the honor which your partiality has conferred upon me: for well I feel that it was intended less as an individual compliment, than as one to the West in general, and to Missouri especially. In this view, and for them, and for myself, I return you the warm, unfeigned thanks of a grateful heart. Relying upon your partiality, which has thus elevated me to my present position, and claiming indulgence for any short-comings in presiding over your deliberations, I shall endeavor to acquit myself to the best of my poor ability. Again, Gentlemen, I thank you.

Dr. Ninian Pinckney, a delegate from the U. S. Navy, then addressed the meeting at length.

The Association was invited by Ex-Mayor Kennett, of St. Louis, to his residence, on that evening.

Drs. Moore, McPheeters and Reyburn also entertained the members. [We think that the sole delegate from Virginia, must have had his hands full, if he was expected to represent the Virginia profession during this part of the proceedings.]

MORNING SESSION—*May 3d.*

A memorial was read from the American Medical Society of Paris. A few reports were read and many committees continued. Dr. Cabell, of Virginia, Chairman of the Committee on Education, in the place of Dr. B. R. Wellford, stated by letter, that his report was ready, but owing to his recent appointment, he had not been able to obtain the views of his colleagues, and therefore the report was only expressive of his own views.

The Committee on Prize Essays awarded but one prize. The one selected was entitled, "*An Essay on a new method of treating ununited fractures, and certain deformities of the osseous system.*" It bore the following motto in French, which translated, reads thus:

> "And notwithstanding all the pains I have heretofore taken, I have reason to praise God, in that it hath pleased Him to call me to that branch of Medical practice commonly called Surgery, which can neither be bought by gold nor by silver, but by industry alone and by long experience."

The seal of the packet was then broken, and the chairman announced the name of Dr. BRAINERD, of Chicago, Ill.

Resolutions were adopted agreeing to incorporate with the Transactions of the Association, memoirs of deceased members, and such names as Chapman, Morton, Drake, Pattison, Kearny Rodgers, Horner, &c. &c., were suggested. [It would seem that the Association, like most other such bodies, was being made the vehicle of personal glorification, instead of carrying out its legitimate object of advancing and improving the condition of medical science throughout the whole country.]

Dr. McIlvaine, of Ohio, offered the following resolution:

Resolved, That in the opinion of this Association the practice of professors *reading* lectures to their classes, no matter with how much care selected from the musty records of antiquity, is a miserable apology for teaching—is prima faciæ evidence of their inaptness to instruct, and is inimical to medical progress. Laid on the table.

An invitation was received from Col. John O'Fallon, inviting the members to an entertainment at his country seat.

The Convention adjourned.

EVENING SESSION—*May 3d.*

The thanks of the Association were tendered to the late officers.

Most of the committees on scientific subjects reported themselves as *not ready*, and were continued.

Dr. Davis, of Illinois, exhibited some specimens of milk prepared so as to make a voyage of any distance without becoming impure.

The Association then adjourned.

MORNING SESSION—*May 4th.*

Dr. McPheeters stated that all the railroads of the country, except the New York and Hudson River Company, had agreed to take the members home without cost.

An invitation was received from the Directors of the Pacific Railroad to take an excursion. The invitation was accepted.

Dr. Gross offered the following resolution which was adopted, and Dr. G. was appointed on the committee.

Resolved, That a Committee of one be appointed by the Chair, to inquire into the causes which obstruct the formation and establishment of our National Medical Literature, and to report on the subject at our next regular meeting, or as soon thereafter as practicable.

Dr. Peebles, of Va., was excused from acting as Chairman of the Committee on the Epidemics of Virginia and North Carolina, and Dr. W. D. Haskins, of Richmond, was chosen in his place.

The special committees were now appointed. Amongst others, we notice that Dr. P. Claiborne Gooch was made the Chairman of the Committee on Administration of Anæsthetic Agents during Parturition.

A majority of the Committee on Publication having been selected from New York, Dr. Reyburn moved *not* to accept that Committee. The effect would be to transfer the Association printing from Philadelphia to New York. He did not think that the business would be done better, and he opposed it.

A lengthy and warm debate ensued.

On motion of Dr. Sayré, the meeting resolved itself into a Committee of the Whole, and the *struggle after the spoils* was renewed with greater ardour.

The Committee of the Whole, on rising, reported in favor of Dr. Reyburn's proposition, and it was adopted by the Association.

An adjournment took place.

AFTERNOON SESSION—*May 4th.*

Various resolutions were offered. Dr. Eve moved that the blank caused by the adoption of Dr. Reyburn's resolution, should be referred back to the Committee on Nominations, so that the Committee on Publications should be re-constituted. Lost.

The question recurred on the adoption of the original report, *making the majority of the Publication Committee to come from New York. Which was adopted*, after an animated discussion.

Dr. White, of *New York, offered a vote of thanks to the late Publishing Committee.*

The following communication was then read:

> The delegates from Philadelphia feel themselves authorised to resign, in the name of Dr. Condie of Philadelphia, the office of Treasurer of the Association.
>
> (Signed) RENE LA ROCHE,
>
> *On behalf of the Philadelphia delegation.*

The resignation of D. Condie was accepted, and on motion Dr. Charles Hooker of Connecticut, was elected treasurer.

Dr. Hooker declined, and his resignation was accepted.

Dr. F. West of Philadelphia, tendered his resignation as Secretary. It was refused.

A resolution was unanimously adopted, tendering the thanks of the Association to Dr. Condie for the able and thorough manner in which he had performed the arduous duties as Treasurer.

On motion of Dr. Breckenridge of Kentucky, it was

> *Resolved,* That hereafter, the majority of the Committee on Publications shall be selected from among the Physicians of that city in which the Association may annually meet.

Thus in effect, giving the printing *to that city in which the Society might meet.*

Resolutions of thanks were passed in favour of the citizens of St. Louis, the Committee of Arrangements, &c., &c.

Dr. Blatchford was nominated as Treasurer; who declined, and subsequently Dr. Isaac Wood, of New York, was chosen.

After various motions, the Association adjourned *sine die.*

[ED. NOTE.—We must not neglect to thank our friends of the *New Jersey Medical Reporter*, for their admirable report of the St. Louis meeting, from which this abstract is taken.]

We are pleased to learn that MARTYN PAINE, M. D., Professor in the Medical Department of the University of New York, has received another distinguished honor from the European Faculty, having been recently elected a Corresponding Member of the *Gesellschaft für Natur und Heilkunde zu Dresden;* and it is worthy of remark, that Dr. Paine is the first American to whom the honor of membership has been extended.

There is no man in America who better deserves these complimentary notices from abroad than Dr. Paine. His untiring energy, and unflagging devotion to the best interests of the profession, render him the worthy recipient of these repeated honors.

We desire to correct the statement of our reporter during the late session of the Medical Society of Virginia, in one particular. We do so at the request of Dr. Bolton, the Chairman of the Committee on Quack Medicines.

Our reporter says:

> "Dr. Bolton, from the Committee on Quack Medicines presented a report in which the other members of the Committee declined to unite," &c., &c.
>
> The report was laid upon the table and remained there."

In order to be perfectly accurate, we substibute for this language, the report of the Secretary of the Society, as follows:

> "Dr. Bolton, from the Committee on Quack Medicines,* made a report, which was received.
>
> Dr. W. D. Haskins made a motion that the report should be laid upon the table and the committee discharged, but subsequently withdrew it.
>
> Some further discussion ensued as to the disposition to be made of it, but the hour having arrived for taking up the report on the Stethoscope, the subject was passed over."

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* NOTE.—Dr. McCaw had withdrawn from this Committee.

We regret to record the sad death of Dr. G. W. Caulfield of this city, which occurred on the 5th of May last. He died suddenly, whilst on a fishing excursion upon James river.

Dr. Caulfield had recently graduated at the Virginia Medical College, and was entering upon life with every inducement which youth and good talents could give. He closed his short career only a few weeks after he had attained his majority.

We also have to notice the death of Dr. Albert C. Pleasants, a fellow of the Medical Society of Virginia. He died at his father's residence in this city, after a long illness.

Prof. Jameson.—The Edinburgh Medical and Surgical Journal announces the death of the venerable *Professor Jameson*, who has occupied the chair of Natural History, in the University of Edinburgh, for half a century.

M. Roux.—This eminent surgeon, died in Paris on the 24th of March, at the advanced age of 73. He has been a member of the profession, around which he has shed so much lustre, for 58 years; having entered the army as a surgeon of the third class, at the age of 15. For the last thirty years, he has been regarded as one of the most eminent men in Paris; and on the death of Dupuytren, became the senior surgeon of the Hotel Dieu.

THE VIRGINIA MEDICAL AND SURGICAL JOURNAL.

ART. I.—*Case of Fibrous Polypus of the Uterus.* By R. L. MADISON, M. D., Petersburg, Virginia.

L. B., free black, æt. 46, applied to me, November, 1853, to obtain relief from a profuse and painful menorrhagia with which she was suffering. Being hurried at the time, and supposing that her condition was the result of disordered function incidental to her period of life, I did not enter into a careful examination of her case, but simply directed that the uterus and vagina should be frequently syringed with a strong astringent solution, and that she should take fifteen drops of the aromatic sulphuric acid three times a day. Perfect rest in the recumbent posture was also enjoined. Ascertaining in a day or two that she was much better, my visit was not repeated.

Early in January of the present year her daughter informed me that she was again troubled in the same way as when I first saw her. She was ordered to have recourse to the same remedies which were first used; and the following day the report of her improved condition deterred me from visiting her.

In March, I was again requested to visit her, and found her much weakened, and prostrated by the loss of blood. She complained of violent shooting pains in the hypogastrium, accompanied by a distressing sensation of weight and bearing down, greatly aggravated by the erect posture, and painfully interfering with the acts of defecation and urination. I endeavoured to pass the speculum, but found a mechanical impediment to its introduction. A vaginal examination, however, with the index finger, revealed the existence of a tumour nearly filling the vagina, and evidently springing from the os or cervix uteri; although at this examination, I was unable to find the os uteri, owing rather to the unusual contraction of the vagina, than to the size of the tumour.

Emollient cataplasms were applied to the abdomen, and an anodyne administered internally. I supposed that I had now met with a case of "polypus uteri," but the almost cartilaginous hardness of the tumour, and the severe lancinating pains of which the woman complained, suggested the possibility of its being malignant in its character. The next day, I requested my friend Dr. J. F. PEEBLES, of this city, to see the case with me.

His opinion, based upon a minute and careful examination was, that the tumour was fibrous, non-malignant, and adherent to the posterior labium by a short pedicle. The introduction of the uterine sound into the os settled the difficulty on this point.

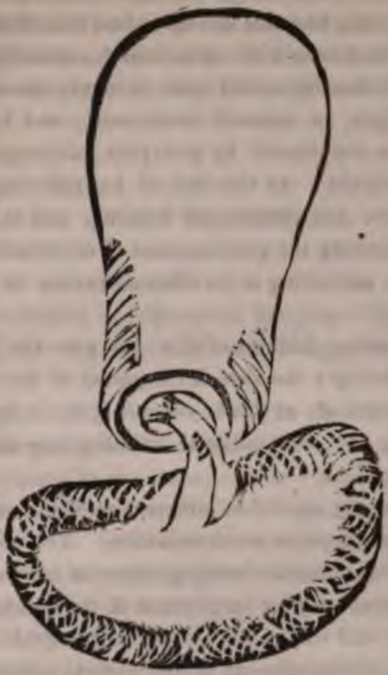
The removal of the tumour having been determined upon, I visited my patient on the following day, accompanied by Drs. Peebles and Claiborne.

The first plan of operation which suggested itself was to ligate the pedicle of the tumour by means of a wire, and double canula; but owing to its peculiar shape and position, this was found impracticable.

Dr. Peebles then endeavoured to snip the pedicle with a pair of scissors of lateral curvature, using the palmar surface of the left index finger as a guide; but the curvature not being sufficiently great, the attempt had to be abandoned. I then proposed the introduction of a volsella, by which the tumour could be grasped and twisted off from its attachment. Dr. Peebles, however, wishing to preserve the tumour entire, preferred making traction in a different way. Introducing the index and middle fingers of his right hand into the vagina, and passing them behind the body of the tumour so as to embrace the pedicle, he was soon enabled, by moderate traction, to tear it away.

Scarcely a drop of blood followed the operation, which was comparatively painless.

The accompanying diagram accurately delineates the position of the polypus, and its manner of attachment.



Upon inspection, the tumour presented a perfectly homogeneous appearance,—of a pale, blueish colour, a smooth, glistening surface; divided by a slight linear depression into two nearly equal lobes.

It constitutes a beautiful specimen of fibrous polypus, and serves to illustrate a rare and interesting form of disease.

Since the operation, I obtained the following remarkable history of the case, which goes to show the wonderful powers of endurance sometimes manifested by the human constitution:

"The catamenia were established at 15. She had enjoyed uninterrupted health until her 22d year, when she gave birth to her first and only child, (October, 1830.) She suffered greatly with engorgement of the uterus for three months after confinement, which was followed by a leucorrhœal discharge which continued with more or less severity for the ensuing ten years; the catamenia being perfectly regular the whole time. In August, 1840, however, she was attacked with a severe menorrhagia of a week's duration. It reappeared in two weeks, and continued for two weeks; and this strange abnormal alternation was kept up for about *thirty months* with undeviating regularity. At the end of this period, the flooding would come on at any time after the slightest physical fatigue, or venereal excitement; and her troubles, she says, were further complicated by prolapsus; although on this point, I entertain some doubt. At this date of her sufferings, she supposes the tumour to have first commenced forming, and to have slowly increased in size, creating the great amount of constitutional disturbance before alluded to, and acting as an effectual barrier to the marital congress.

The most interesting features of this case are—the long duration of the woman's sufferings; the slow development of the tumour, extending through a period of at least *fourteen years;* and the immense amount of uterine and constitutional irritation engendered by its presence.

She had frequently applied to different medical men, but in no instance had been subjected to an examination. The origin, growth and location of the tumour acted as exciting causes of hæmorrhage; first, by sustaining a constant vascular turgescence of the uterus; and secondly, by keeping the os and cervix uteri in a patulous condition. Thus was formed a mechanical impediment to that natural consolidation and contractedness of the uterine tissues so imperatively necessary in preventing or arresting hæmorrhage; and creating as a permanent condition, a state of things naturally existing only during the regular catamenial flow.

Unquestionably an earlier diagnostication of the pathology of the case, would have saved the woman years of corporeal pain. In all cases of severe or protracted menorrhagia, where the usual remedial means fail, or afford but temporary relief, a vaginal examination should be insisted upon by the physician, as the best means of removing all doubt concerning the true nature of the case. For, otherwise, no one can possibly assert that the hæmorrhage depends upon local hyperhæmia; upon the existence of polypus; or upon scirrhus of the os or cervix.

About three months have now elapsed since the tumour was removed. The woman's general health is entirely restored, and she declares herself better than she has been for twenty years. The uterus is still somewhat enlarged, but evidently subsiding under the combined influence of the iodide of potassium and the iodide of iron.

The catamenia have not returned, and the probability is that they never will, as the age at which they ordinarily cease, has already been reached.

ART. II.—*Contributions to Operative Surgery*. By JOHN P. METTAUER, M. D., LL. D., Prince Edward County, Virginia.

Extirpation of the Parotid Gland.—The parotid gland is liable to scirrhus and other malignant transformations of its structures, which, if permitted to pursue their course, end in ulceration and its consequences. Modern surgery, however, has, in numerous instances, arrested the progress of these transformations, and prolonged life; demonstrating that the extirpation of the gland, which was esteemed by most of the early surgeons as of doubtful propriety, nay by many as impracticable, is both justifiable and practicable.

In 1831, I extirpated the diseased parotid for the first time; and I was induced to undertake the operation, in a case of scirrhus of the organ, from reading an account of Dr. George McClellan's success in the case of Dr. Graham, a short time before, as reported in the 5th vol. New York Med. & Ph. Journal. I had, however, always considered the operation practicable and free from danger to life, although environed with difficulties. Since 1831, I have repeated the operation six times—in all, having operated in seven cases; and my experience leads me to regard it as justifiable in all cases of scirrhus of the organ, of increasing development, and sometimes after ulceration has taken place.

The first case in which I operated was for scirrhus of the entire gland, of more than three years' duration; and it occurred with a man 28 years old, whose previous health had been good; but it had become somewhat impaired, since the enlargement of the parotid began to increase more rapidly. When I first saw this case, the tumefaction presented above the contiguous borders of the parotid depression more than two inches, and I supposed it to be fully eight times the size of the healthy gland. It was of a smooth convex appearance, and oval shape, and extremely hard and resisting under pressure. It extended from the base of the corresponding left mastoid process of the temporal, two inches down the neck, below the angle of the inferior maxillary bone, and was fixed and immovable. There had been occasional lancinating pain felt through the tumour, at nearly every stage of its development, but not sufficient at any time to cause much suffering. The enlargement had been exceedingly slow and gradual, until the last year, during which period the size of the tumour had more than doubled itself. No cause could be assigned for the tumour. There certainly was no reason to ascribe it to local injury. Its progressive augmentation, taken in connection with the long continuance of the tumour, left no grounds to hope for a cure by any other means than extirpation; and that expedient was resorted to on the 13th of November, 1831.

The following was the mode of operating I adopted: A perpendicular incision was formed from the base and forepart of the corresponding mastoid process of the temporal, along the middle of the tumour, and continued two inches upon the side of the neck below the angle of the inferior maxillary bone. This incision was carried boldly through the investing structures quite into the substance of the tumour, and fully an inch beyond each extremity of it. A flap was next turned off from each side, which exposed the surface of the tumour, and which was somewhat elevated above the parotid depression, by the division of its capsule. Care was taken not to wound the cartilaginous tube of the external ear. The tumour now was forcibly drawn out from the parotid depression by strong double hooks, and the flaps held apart by an assistant, so as to enable me to dissect more readily beneath it. During the dissection, the edge of the knife was turned constantly to the tumour, and the incisions were short and rather scratching and exploratory. Where the connecting textures were loose, the handle of the knife was used. The extremities of the tumour were soon separated so as to enable me to pass my finger under them a short distance, and to render the diseased body somewhat looser. I next attempted to detach the tumour by forcing the left index finger under it, while the assistant made forcible and steady traction, with the double hook inserted deeply into its under side. In this effort I was partially successful, only, by reason of the strong connections that confined the tumour; yet, I insinuated the point of my finger beneath it far enough to discover that the parotid was not in very close contact with the surface of the bottom of the cavity containing it. Finding that I could only loosen the tumour by this expedient, without detaching it, I determined to remove it by dissection; and, while it was forcibly drawn out from the depression, with the double hook, I carefully incised and lacerated the connections, using the knife and handle in alternation as became necessary. During this procedure, I found that the external carotid, at its temporo-maxillary portion, penetrated the tumour, but the artery was obliterated and presented as a cord-like transformation, and was divided below the border of the tumour a few lines, as well as the accompanying veins—which, however, were small, and effused but little blood.

I could now draw the tumour out from its bed, with the double hook, more readily, but still it was confined and comparatively immovable. Being held now by its middle and deeply-seated attachments, my aim was to dissect from below upwards, which would enable me more readily to reach them. The hook was inserted deeply into the lower end of the tumour, and pretty forcible traction made outwards and upwards, the flaps being at the same time held apart by an assistant. Insinuating the left index finger beneath the tumour thus held, and pressing outwardly so as to expose the connections, I cautiously divided them, using the point and handle of the knife, for the purpose, as the one or the other became necessary. During this part of the dissection, I preferred to proceed by light applications of the point of the knife, rather than by incision, as already remarked. I found the handle of the knife of great use in tearing through the cellular attachments, so as to insulate the vessels, nerves; and, here and there, ligamentous shreds. In this manner I proceeded until the entire gland was finally removed, requiring from 18 to 20 minutes time. The bleeding was slight. Only two small arteries required the ligature, and they were supposed to be branches of the facial and occipital. I distinctly saw, when the wound was sponged out and well cleared of blood, the internal jugular vein; the internal carotid; the styloid process of the temporal bone; and the margins of the masseter, sterno-cleido mastoid, and posterior belly of the digastric muscles. The young man bore the operation with great fortitude.

After carefully examining the surface of the wound, to discover if any of the tumour had been left; and finding that not a vestige remained, it was closed, using for the purpose sutures and adhesive plasters.

A wet compress was then laid on and confined with a suitable bandage, and the patient placed in bed with his head considerably elevated. The succeeding morning the bowels were purged with oil; and again, on the two following days, the cathartic was repeated. The wet compress was continued for three days, and then was superceded by a cerate dressing and a dry compress. There was very slight inflammation. The ligatures came away on the sixth day. Three-fourths of the wound united by adhesion, and the remaining portion healed by the 12th, and the patient left the infirmary, on the 14th day after the operation, perfectly well. There was very slight deformity of the face from the division of the facial nerve. I was informed, 18 years after the operation, that the man remained well, and that there had never been the slightest re-appearance of the tumour.

The method of operating adopted in this case, and briefly described above, is the same that I have pursued in six others, with such variations, however, as the deligation of the external carotid and other vessels, might require; or, when ulceration had taken place in the diseased parotid. Of the whole number of my cases, five were permanently cured, and their subjects are yet alive, now more than 7 years since the last was treated. The two unfortunate examples were attended with ulceration of the tumours. Nevertheless their wounds healed perfectly and in a very short time; but the disease returned, and finally ended in death.

Parotid tumours should be removed early, and, if possible, before they ulcerate. It is best, however, that they attain some magnitude, before their removal is attempted. When enlarged, the gland is more readily and safely extirpated, by reason of the partial displacement it undergoes as enlargement takes place, from wedging itself out of the parotid space against the borders of that space. Scirrhus and fungoid disease of the parotid, like those affections when attacking other organs, are liable to reappear after extirpation, and the only plan of treating them successfully is to remove the reappearing tumours as early after the return as possible; and to repeat the operation again and again until the disease is eradicated, unless the constitution is profoundly contaminated. Even then, if the tumours are comparatively local, extirpation would be justifiable, as it affords the only chance for relief. The deformity of the face from the division of the facial nerve is very soon corrected. Before dividing the facial nerve, I uniformly aimed to draw it out of the tumour, and to cut as few of the branches as possible—chiefly the central. In each of my cases, the amelioration was coeval with the complete healing of the wounds; and after six months very little of it was discoverable, and, only, when the individuals smiled or cried. In the two unfortunate cases, the operation was not repeated, nor have any of my cases required it except those two. Why these cases were not presented for a second operation, I have never been informed. That the cases operated upon were scirrhus of the parotid, I am positively certain; and, that the entire gland was removed in each case, I assert as an undeniable fact.

Scirrhus, and Fungoid Affections of the Female Mamma.—The recent report in regard to "the results of surgical operations in malignant diseases," of Dr. Gross, chairman of the committee appointed by the American Medical Association, to examine into and report upon that subject, does not accord with my experience in the treatment of those affections. I have extirpated 42 mammæ, 28 of them affected with scirrhus, and 14 with fungoid. Of the 28 cases of scirrhus, 15 were in a state of ulceration, and 13 without the slightest ulcer, or disposition to it. Of the 14 cases of fungoid, 8 had ulcerated, and 6 had not. Of the 42 cases, 28 were perfectly cured, and, at the date of this paper, continued well—more than three years now since the last one was operated on. Of the successful cases, 19 were scirrhus and 9 fungoid disease.

One of the cases alluded to, commenced as scirrhus, and finally, after three years continuance, ulcerated. When the patient came under my care, the ulcer had existed 6 months. I found the whole mamma implicated and somewhat enlarged, and three large axillary tumours, one about the size of an ordinary peach. The subject of this case was a negress about 47 years old, and when she was placed under my management, had become considerably emaciated. Her previous health had been very good. She had borne several children, but for 15 years had been sterile.

The mamma was naturally large, and although the ulcer was quite extensive, a sufficient flap on each side of the incision was preserved, and of healthy integuments, to cover the wound without much traction. The entire mamma, and the three axillary tumours were removed in the ordinary way, and without much difficulty. The wound was closed with sutures and adhesive plasters, as is common; and the water dressing, with a suitable bandage, was employed. The bowels were purged daily, until all danger of traumatic fever had passed. The case recovered rapidly; and in 14 days, the patient left the infirmary entirely well.

In the course of 10 months, this woman returned to the infirmary with a second tumour, in the exact situation of the first, and fully as large. It was in an ulcerating condition, and very much, in all respects, of the same shape and appearance as the one upon which I had operated. There were also two tumours in the axilla, one fully as large as the largest of the first. Had I not removed, in the first operation, the entire mamma, it would have been difficult for me to be convinced that the present was not a disease of the mammary gland, so closely did it resemble the first tumour. The general health had become much impaired. There was considerable emaciation. This tumour was quite hard, but less so than the first. Its growth had been exceedingly rapid since it had attained the size of an egg. The disease reappeared along the line of union in five distinct places—and nearly at the same time—as small tubercles about the size of large shot, unattended with pain, and were exclusively located in the cicatrix. As these tubercles enlarged, they amalgamated, involving the contiguous parts. The disease, as already stated, had existed 10 months, when the woman returned, yet the axillary swellings had only been perceived two months previous to that time.

These tumours were again extirpated, not, however, without considerable difficulty, especially those of the axilla, by reason of their close connection with the axillary vein and artery. They were removed, and the extensive wound resulting being managed as in the first instance, speedily healed up. In 18 days the cicatrix was perfectly formed.

For two months after the healing of the wound, everything went on most favorably. The general health had greatly improved. At this time, three small tubercles made their appearance, at different regions of the cicatrix, resembling, from the description I received of them from an intelligent individual, the first that appeared. Without delay they were extirpated, and I took care to remove, with each one, a liberal portion of the surrounding structures. The wounds were closed in reference to union by adhesion, and a speedy cure. The water dressing was also employed, to prevent undue inflammation, and the bowels purged daily for three days, as auxiliary to that agency. In 12 days the wounds healed perfectly.

After this operation, the tubercles reappeared, and were extirpated six times,—the woman having submitted to *nine distinct operations*—two of which were exceedingly severe and painful. The ninth operation, however, seemed to remove the last vestiges of the disease; and the woman now, (seven years since,) is well and entirely free from any suspicion of a return. The disease, in its first appearance, undoubtedly was scirrho-cancer; but in its reappearance, it assumed a fungoid appearance; and such alternation I have thrice observed in cancer of the female breast. How far the want of the mammary gland may have influenced the disease, in reappearing, to assume the fungoid form instead of scirrhus, I am not prepared to state; but in the three instances in which it did put on that form, it succeeded the removal of the mamma for scirrhus.

This case is interesting in several aspects. It certainly was interesting to the patient and surgeon, as it caused the woman great suffering, and the surgeon not a little trouble. But its chief interest relates to the precedent it furnishes, in deciding upon, or in rejecting operative procedure, in cancer and fungoid diseases of the female breast. Had no operation been performed, this woman certainly would have died. If the reappearing tubercles had not been extirpated, there is not the slightest reason to doubt that they would have resulted in tumours of the nature of those operated on; as they were of the same form and appearance, and originated in similar locations. The remarkable recovery in this case was due, evidently, to the frequent operations; and from repeating them while the tubercles were small, and before the surrounding textures became implicated. And, it is probable, if a like mode of operating were adopted in the treatment of scirrhus and fungoid, located in other organs of the body, they would more frequently be cured. I ascribe my success, in the treatment of these diseases, only in part, however, to the mode of operating described, in the case in question. An important item with me, in the management of such patients, is the constitutional treatment generally pursued with them, after recovering from the operation. And this treatment consists of aperients; the occasional employment of mercurials to improve the condition of the secretions generally, but more especially the biliary; the nitro-muriatic acid mixture; tonics, both mineral and vegetable; the cod liver oil; in some cases iodine and mineral tonics; a well regulated diet; narcotics, if needed; and free exercise in the open air, if it will not expose patients to catarrhal affections, or to exhausting fatigue;

and the treatment should be perseveringly continued. I believe that these discouraging and too often incurable diseases have often proved fatal, by reason of an unwillingness with surgeons to meddle with them, and a disposition to advise unfortunate patients against active surgical measures; when, if an early resort to extirpation had been proposed, and carried out in practice, many lives might have been saved. A refusal on the part of patients, too, to submit to the repetition of surgical operations in these cases, more especially if discouraged by friends, and not unfrequently by their medical advisers, also, has, in many instances, consigned individuals to the grave who could have been cured; and the case here referred to, is an instance in point. This woman was advised by her friends not to submit to a second operation; but I urged her to adopt the contrary course. She heeded my advice, and her life was saved. These tumours kill, generally, if left to themselves. By extirpating them early, before the constitution becomes recontaminated, and while the disease is, in a great degree, local, the only rational chance for a cure is afforded. My rule, now, is to operate in every instance, unless the disease is already manifesting itself as a pervading constitutional affection; or the patient is too feeble to sustain an operation; and, to repeat it as often as the disease reappears, as early as possible after its return; and to continue to do so until the fell disease is hunted down and eradicated from the system.

ART. III.—*Extreme Rigidity of the Os Uteri, Associated with Puerperal Convulsions, Treated by Incision of the Os.* By WILLIAM J. HARRISON, Newville, Sussex County, Virginia.

Mrs. ———, aged 25, sanguine temperament, was taken in labour with her first child, on the 10th of last March. The pains were very active from the beginning. After some four or five hours, she was suddenly seized with a convulsion. My friend, Dr. Hall, who had been summoned to attend her, being present, promptly bled her, but afterwards in exploring with the view of devising measures to facilitate labour, found the os closed, and unusually rigid. Considering the case critical, on account of the severity of the convulsions and the extreme violence of the uterine throes, he requested aid, and I saw her in consultation late that night. My examination confirmed the report of the state of the os, which had been made to me. I found it hard, and altogether unyielding. Another free and full bleeding was determined upon and practiced. It was without producing the desired effect. Nauseants were then fully tried, and all other measures usual in such cases, to overcome the rigidity, but all to no advantage. Meantime the pains continued with terrific violence, threatening, unequivocally, rupture of the organ, whilst the convulsions remained unabated.

In this state of things, after mature deliberation, we decided to make an incision through the rigid os.

We deemed the measure justifiable, on account of the condition of the patient, and having met with a report of a case,* in our reading, in which the operation had been successfully performed, we concluded that it was, at least, free from great danger.

A guarded bistoury was introduced, and the rigid os divided three-fourths of an inch in the direction of the right acetabulum.

There was no bleeding, and the parts around the incision at once became relaxed. The occiput of the child was pressed onward, and a ring of the os extended around it, and there was every appearance of a speedy delivery.

But this promise was not fulfilled, the favourable advance ceased, and after waiting several hours, we determined to incise the other side, and puncture the head, there existing unmistakeable evidence of the death of the child.

We found it very difficult to complete the delivery even in this way, owing to some inadaptation of our apparatus to the case. It was finally accomplished by Dr. White, of Petersburg, who arrived just at this time, and who happened to have a blunt hook, of a shape exactly adapted to the case.

Not a bad symptom followed the operation. We expected to have difficulty in healing the incised parts, but we did not, and the woman, recovered her health, progressively, and in a month was perfectly herself.

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*See Dr. Patteson's case, reported Va. Med. & Surg. Journal, No. 10, p. 264.

ART. IV.—*On the Treatment of Cranial Fractures.* By BLAIR BURWELL, M. D., of Richmond.

From the vital importance of the brain, fractures of the cranium have always engaged the attention of surgeons, both in civil and military practice, and yet there is no accident to which frail mortality is subject, the treatment of which is so varied and unsettled. For this reason, we have determined to group together statistics of the different plans of treatment, that each one may compare for himself the one with the other, and select that which is best.

With all due deference to the opinions of the distinguished authors we shall quote, in regard to the treatment of fractures of the cranium, we are constrained to differ with the majority of them; believing as we do, in a freer use of the trephine and elevator, than is now practiced. If we are wrong in the conclusions we shall come to, we hope to be corrected by an intelligent profession, as it ist he truth we seek, and not error.

In the works of Mr. John Bell, we are told, that the treatment of fractures of the cranium, by means of the trephine, was practiced with unrelenting perseverance, as if to show how much additional injury the cranium and its contents could sustain, and to prove that the means adopted by nature, to protect the brain from external violence, was altogether superfluous. When we read the cases of Gooch, Pott, O'Halloran, Wiseman and others, in which the trephine was commonly used, two, three, four, and even a greater number of times, and particularly the case of Mr. Chadborn, in which he perforated the cranium of Phillip, Count of Nassau, no less than twenty-seven times, we are almost tempted to believe that their patients recovered more from the "vis medicatrix naturæ," than the skill of the surgeons; in short, they recovered in spite of these multiplied perforations, and not in consequence of them.

But this system of surgery has long since fallen into utter discredit, and one adopted in its stead, which is equally as destructive to human life; we mean that method of treatment which Desault inculcated in the latter part of his life; of renouncing almost in toto every operation, (until, perhaps, it was too late,) and trusting alone to what is termed the expectant mode of treating fractures of the skull.

This latter system of treatment, has had many advocates, from three causes, independent of any merit over the former plan:

1st. Because Desault, who held a high position, and enjoyed a great reputation in France, was its great advocate.

2d. Because it is too much the habit of young surgeons to adopt the plan of practice pursued by their preceptors, or the hospitals which they may have attended, without giving to each case that particular attention and study which it deserves.

3d. Because of the natural aversion which many physicians have to perform an operation which appears difficult to themselves, or painful to the patient.

But it is time such a state of things should have passed away. Physicians should think for themselves, trusting to no man, no matter what may be his position or reputation, farther than an honest conviction of the truth might lead him, after a careful investigation of his principles and practice.

Even now, we find the most distinguished surgeons inculcating methods of practice almost diametrically opposite. Such a difference of sentiment between men whose extensive experience renders it difficult to say which of them are most entitled to respect and confidence, tends rather to perplex young surgeons and injure our noble profession.

I do not intend in this paper to advocate either one of the systems of treating fractures of the skull which we have mentioned, for both are carried to extremes, but I desire to propose a freer use of the trephine and elevator than is now used in the treatment of fractures of the skull, and especially where accompanied with depression of bone.

From various authors which I have read, and a little personal experience, I have been forced to believe, that if more of the cases treated by the "expectant plan," had been at first operated on with the trephine or elevator, many of those who died might have recovered, and that many now suffering from epilepsy, who have been reduced to a state of almost mental imbecility and idiocy, might have been rescued from that most dire of all diseases, would have continued to enjoy, *mens sana, in sano corpore.*

The reasons for the views, which I have expressed above, are these:

1st. In looking over the works which treat of epilepsy, we find fractures of the cranium set down as one of the most frequent causes of that disease.

2d. In nearly all the works on surgery, we find a large number of the cases reported of fracture of the cranium, with depression, had subsequently epilepsy, and were trephined with a view to the cure of that disease.

3d. In most of the cases, the operation was successful.

In Sir Astley Cooper's lectures on surgery, he relates the case of a negro man who received a blow on the head from a hammer, causing a fracture, with slight depression. About four years after that time, he was admitted into St. Thomas Hospital, with epilepsy. His head was trephined by Mr. Birch, who found that a small spicula of bone, from the inner table of the skull, was piercing the dura mater. It was removed, and the patient recovered.

There is another case reported in Sir Astley Cooper's lectures, of a man who received a blow from a brick, on the superior part of the os frontis, which caused a depression. Mr. Hemstead bled and purged him freely, which so much relieved him that in a few days he was apparently well. In about six or eight months from the receipt of the injury, he was seized with epilepsy. The same plan of treatment was pursued, but the disease came on so violently that he was forced to submit to an operation. The trephine was used, and the whole of the depressed bone removed. The patient soon recovered, and has not had a return of the epilepsy since.

Sir David Dundas also relates the case of a man who fell from a ladder and fractured his skull, causing depression. So much time had elapsed after the accident, that the depressed bone had become reunited to the cranium. The man had become insane, and had hemiplegia on the opposite side. He immediately trephined him, removing the depressed bone. On the next day his insanity passed away, and in a fortnight the hemiplegia disappeared; the man recovering entirely.

The first number of the Transylvania Journal of Medicine contains a highly interesting paper on the subject of injuries of the head, by Professor Dudley, in which there are three cases of epilepsy, from injury of the cranium, cured by the trephine. Such has been the experience of Professor Dudley in regard to injuries of the head, and the production of epilepsy from such causes, that he has been induced to depart from the commonly received principles by which surgeons are governed in regard to the use of the trephine. He has so frequently seen the evil consequent upon fractures of the cranium, being treated alone by the expectant mode, that he advocates the freer use of the trephine, and says, "In skillful hands the operation beyond the atmosphere of large cities," (and he might have added, large hospitals,) "is neither dangerous in its consequences, nor difficult in execution."

There are also two cases of epilepsy, from injury of the skull, cured by the use of the trephine, under the management of Mr. Cline. There is another reported in the Medical Times and Gazette, occurring at the London Hospital, under the care of Mr. Adams. There are also many others reported in the different works on surgery, and medical journals; to notice all of which would prolong this paper to too great an extent. But before closing this part of the subject, I will give the result of some cases, which happened under my own observation. While a student and for sometime connected with the College Infirmary (in Richmond) I saw six cases of epilepsy, four of which were supposed to be produced from injuries of the head. Two of these cases were trephined and depressed bone removed. Both were discharged from the Infirmary cured, and as far as I know, have continued well. One of the patients operated on, had two depressions in his skull, caused by the bursting of a gun. Some seven or eight years after the accident, he was operated on in Philadelphia, and was relieved for several years; after which time the epilepsy returned frequently and violently. He came to the College Infirmary in Richmond, where he was trephined twice, as stated above. In two of the cases, the cause was unknown, and the other two from some reason, were not operated on.

These cases are sufficient to show that epilepsy is frequently produced by fractures of the cranium, with depression, when treated on the expectant plan, as the depression must necessarily remain, unless the trephine or elevator is used, and it does appear to me, that every surgeon will agree that it were better to perform the operation of trephining or elevating at the time of accident, than to relieve the patient for a time, perhaps, suffer him to have epilepsy, and then either to trephine him or let him live out a miserable existence. Sad, indeed, must be the reflections of that surgeon who witnesses a patient with epilepsy, caused by a depression of bone which he himself had suffered to remain, when it might have so easily been removed by an operation.

But some will say, patients who have their skulls fractured, get well, live a long time with depressed bone, and never have epilepsy. This I grant, but there are many chances against them, and it is the duty of every surgeon to look not only to the immediate safety of his patient, but to his permanent relief both of body and mind. Others will say that the injuries necessarily inflicted by an operation of the kind recommended, added to the injuries already sustained by the fracture, would produce inflammation of the brain, and death. Perhaps it might, but I do not believe that inflammation would be as likely caused by the operation as by the pressure of the bone on the membranes of the brain. Nor do I believe that the operation of trephining necessarily adds to the danger of the patient, or is as dangerous as it is generally considered by the mass of the profession.

For authority on these points, I shall quote from Balingall, who says, "I cannot look upon the operation of trephining as adding in almost any degree to the danger of those hazardous cases in which it ought to be employed;" also, "that while it is an operation neither painful to the patient, nor difficult to the surgeon, we should not be hurried by this, into an undue partiality for its performance, &c." We have already quoted the language of Professor Dudley, on the same subject.

From various statistics which we have collected of fractures of the skull, it would appear that the use of the trephine has been more successful than any other plan of treatment adopted.

In a report made by Dr. F. D. Lent, of the cases of fracture of the cranium, treated in the New York Hospital, for a period of twelve years, we find 128 cases. Of that number, 45 cases were operated on, either with the trephine or some instrument appertaining to the trephine case, (such as the elevator, Heysaw, &c.,) while 83 were treated on the expectant plan. Now, of the 45 cases which were trephined, 11 were successful, or one-fourth; while of the 83 cases treated on the expectant plan, only 11 got well, or one-seventh. In this number of cases, the trephine practice was not only the most successful, but the argument is still stronger in its favour when we consider that it is generally in the worst cases of fracture, that the trephine is usually resorted to.

Again, in looking over the work of Mr. John Bell, and collecting the cases of fracture of the cranium which he mentions, we find 20 in number, embracing the several varieties of fracture; 10 of which cases were subjected to the trephine, the other 10 cases to the expectant plan; of the 20 cases, 14 were cured and 6 died; 7 cases of each plan of treatment were successful, and three of each unsuccessful. Mr. Bell also mentions five other cases that were trephined; either for the purpose of evacuating matter which had formed within the skull, or for extravasation of blood; three of which cases were successful, and two died.

These cases of Mr. Bell show that the trephine practice was as successful as the other, and that the trephine operation is not as necessarily fatal as many would represent it.

There is one form of fracture of the cranium which is very common, about the treatment of which surgeons are not so much divided in opinion. I mean the punctured fracture, in which the outer table of the skull is merely perforated, while the inner is almost sure to be splintered. Most surgeons recommend that the trephine should be immediately applied, not for the purpose of removing any pressure from the brain, but that the little splinters of bone may be picked away; which, if allowed to remain, would act as points of irritation, and produce inflammation of the brain and its membranes.

In simple and compound fractures of the cranium with depression, there is, however, considerable difference of opinion in regard to the treatment. Thus, we are told by a large number of distinguished surgeons, that in these forms of fracture, even though depression of bone exist, unless symptoms of compression are present, we should never use the trephine, and not then, until the most rigid antiphlogistic regimen, (or the expectant plan) had been tried. This, I think is carrying the expectant treatment too far, and often results in inflammation of the brain, and the death of the patient.

It is this postponing of the operation which has served to bring it into such utter disrepute, and not any danger which attends it, when performed in time. I venture to say, if any one will take the trouble to look over the cases of fractures of the cranium, reported in the various works on surgery, he will find that three-fourths of the cases that died, in which an operation with the trephine had been performed, were not operated on until symptoms of inflammation had shown themselves.

In Sir Astley Cooper's lectures, I find nine cases of death from fracture of the cranium, in which the trephine was used. But of the nine cases thus mentioned, six of them were not operated on until this expectant treatment was practiced and inflammation of the brain was manifest. The other three cases, it is stated, were trephined immediately after the accident, but in all three there was extensive laceration of both the brain and membranes. Again, you will find that Sir Astley Cooper reports more cases of fracture of the skull cured, in which the trephine was used, than where the expectant method was practiced. Yet this great surgeon would have you postpone operating in almost every case, no matter what the symptoms were, until you had tried the expectant plan of treatment.

From these data we are forced to the following conclusions in regard to the use of the trephine:

1st. That it should be used where it is ascertained that pus or extravasated blood exist between the dura mater and skull, giving rise to symptoms of compression of the brain.

2d. In all simple fractures of the cranium where symptoms of compression continue after depletion.

3d. In all simple fractures of the cranium with depression of bone, *unless very slight*, whether symptoms of compression exist or not.

4th. In all compound fractures of the cranium, with depression of bone, whether symptoms of compression of the brain exist or not.

5th. In all cases of punctured fractures of the cranium.

In the last three conditions, the operation ought to be performed immediately, or as soon after the accident as possible.

Let us now sum up the reasons for the above conclusions, which I hope have been discussed fairly and satisfactorily.

1st. Because the operation of trephining the skull is not so dangerous as many suppose, when performed promptly and skillfully, as proved by the number of cases which have been successfully treated.

2d. On account of the liability of patients who have had their skull fractured and treated on the expectant plan, to have epilepsy.

3d. From the number of cases of epilepsy caused by fractures of the cranium, that have been cured by the use of the trephine.

4th. On account of the liability to inflammation of the brain, when the operation is postponed from pressure of the bone upon the brain, or from irritation of the dura mater by the little spiculæ of the vitreous table of the skull, which, with Ericksen, I believe happens to a greater or less degree, in almost every form of fracture. Professor Ericksen says "In the majority of cases, whether the fracture be simple or compound, there is comminution of the injured portion of bone." And again, he says "in all ordinary depressed fractures of the cranium, the internal table of the skull is splintered to a greater extent than the outer table."

This condition of things, Professor E. does not attribute so much to the brittleness of the inner table, as he does to the direction of the fracturing force from without inwards; causing a certain loss of momentum in passing through the outer table, just as the aperture of exit made by a bullet is larger than that of entry.

In support of this latter view advanced by Professor Ericksen, allow me, in closing this paper, to offer a case which happened in my own practice:

On Thursday night, April 27, 1854, about half-past eight o'clock, I was called to see John ———, a boy about 13 years of age, who had received a blow from a stone high upon the forehead a little to one side. There was a wound about two inches in length, somewhat crescentic in shape. Upon probing the wound, I found a fracture with considerable depression of a portion of bone. The boy seemed somewhat stunned by the blow, (which occurred about two hours before I saw him,) and inclined to sleep, though when questioned gave very intelligible answers as to how he was hurt, who struck him, and how he felt. Thinking that an operation was necessary, I asked for consultation, and Dr. Edward Drew was called in. After he had examined the wound, we determined to operate, although there were no symptoms of compression of the brain demanding it at the time.

A small portion of his hair being shaved off, the operation was commenced by making an incision about three to four inches long, from before backward across the wound, and another across the first, along the line of the wound. The flaps were then dissected back, and the fracture brought in full view. The fracture was about two inches in length, extending from near the temporal ridge, towards the median line of the os frontis. The nature of the fracture was somewhat rare; the depressed portion being broken very much at the expense of the outer table, while the arch was broken in an opposite direction, making a very oblique fracture, with the shelf of the depressed portion extending under the arch of the cranium, between the fourth and half of an inch, so that it was impossible to use the elevator, until a portion of the arch was removed by the trephine. This was readily done, and the depressed portion easily raised to its proper position. *There were several small splinters or fragments of bone lying loose,* which were removed with a pair of delicate dressing forceps. The flaps were then adjusted and held in position by small adhesive strips; cold water dressing was then applied to the wound, and the patient ordered to be kept perfectly quiet.

Friday, 28th, 11 A. M.—Dr. Drew and myself visited patient together, and learned he had spent a quiet night, sleeping nearly all the time. There was slight flush about the face, some fever, pulse 85, tongue furred. He complained of no pain. Five grains of calomel was ordered every four hours, until he took twenty grains, which acted on the bowels twice. His diet was a little milk and water tea, with a cracker. We saw the patient again in the evening. His condition was very much the same as in the morning.

Saturday morning, 10 o'clock.—We again visited the patient, and learned he had spent a quiet time since our last visit, until about 9 o'clock that morning, when he was very much disturbed by a commotion in the house, when, to use his own language, "the noise jarred the inside of his head." From that time he had suffered considerable pain in the head; there was very little fever; tongue nearly clean. The dressing was removed and the wound inspected, which looked remarkably well, having united for a considerable extent by the first intention. The cold water dressing was reapplied, and two grains of calomel given every three hours, until ten grains were taken; diet same as above.

Saw the patient again that evening, and found his condition very much the same, except he did not suffer as much pain.

Sunday morning, April 30.—John had not rested well through the night; face flushed; more fever, pulse 112; slight hacking cough. Gave a powder of magn. calc. ʒss; pulv. rhei, grains v. In addition, gave every three hours, a drachm of the following mixture: Spts. mindereri, ℥i; spts. æther. nitras. ʒi; aq. ℥i.

In the evening saw the patient again; found he had been quite freely purged, and his condition much better. There was not so much fever; pulse 100; skin somewhat moist, and pain in the head relieved.

May 1st, 10 A. M.—Visited John, and found him much better; he had a good night's rest; his skin was moist and pleasant; little or no fever, pulse 88. He takes no medicine to-day but the spts. mindereri and nitre mixture, a little boiled rice allowed in addition to tea and crackers; cold water dressing to the wound, which looked remarkably well.

May 2d.—Patient is improving; same treatment continued as on yesterday. Diet, tea, crackers and rice.

May 3d.—John much better; entirely free from fever; is improving rapidly. Same mixture continued; wound dressed, which has healed, except a small place in the centre. An egg was allowed for breakfast, and a little chicken water for dinner. The patient improved rapidly until May the 13th, when he was discharged cured. I have seen him frequently since, and he is perfectly well.

CLINICAL LECTURES.

I. *Lectures on Uterine Hæmorrhage. Delivered at the Hôpital des Cliniques.* By Professor PAUL DUBOIS. (*Gazette des Hôpitaux,* No. 12.)

LECTURE II.*

At the last lecture, I remarked that in uterine hæmorrhage supervening immediately upon child-birth, there were two principal indications to fulfill, viz: to induce the contraction of the uterus, and to moderate the exaggerated force of the circulation. The first of these indications is met by the employment of ergot, and by certain manual manœuvres; the second by the use of refrigerants, and by compression.

Ergot is the more valuable as a remedial agent in these cases, because it excites the organic contractility as well as the contraction of the uterine tissues. The powdered ergot is the best preparation; it is also that which can be procured with the greatest facility, for it is found almost everywhere. The dose is from thirty to fifty grains; thirty rather than fifty. I usually prescribe thirty grains, in four powders; one to be taken every five minutes. It is important that the powders should be given in rapid succession in order to maintain the contraction of the womb. They are usually administered in a little sweetened water or some similar vehicle; but it is well to know that ergot cannot always be given in this way. In women who are depressed from the loss of blood, nausea is so easily excited that it is sometimes necessary to give the powder of ergot by the rectum. Even this mode of administration is sometimes difficult. If the powder is placed in an ordinary syringe, it is deposited in the barrel of the instrument, and does not reach the rectum. It is better to place it in the canula, which may be screwed on after the syringe is filled with liquid; in this way it is expelled by the first pressure on the piston. Apparatus have been devised to facilitate this method of administering ergot, but, as a general rule, ingestion by the mouth is preferable.

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* See the April number, p. 86.

I have remarked that uterine contraction should be excited or encouraged by certain manipulations. These manœuvres consist in frictions upon the uterus through the abdominal walls, combined with pressure and a sort of *kneading* of the womb. Such manipulations, cautiously employed, often suffice of themselves to produce firm contraction of the uterus, but they cannot be relied on always.

Another more important manœuvre, which must be employed when those just mentioned are insufficient, consists in the introduction of the hand into the uterine cavity. But I should observe at once, that the introduction of the hand into the uterus is not designed solely to excite the contractility of that organ, but that another and not less important object which we attain by it is the removal of the coagula from the uterus and vagina, which maintain the hæmorrhage, and are likely to keep it up indefinitely. Usually, the introduction of the hand produces an energetic uterine contraction; but, occasionally, this contraction does not ensue. What should be the conduct of the obstetrician under these circumstances? Ought he to withdraw his hand immediately, or should he suffer it to remain? Some accoucheurs advise that the hand should be kept in the uterus until it contracts firmly. The introduction of the hand is a very valuable remedy. Its advantages and disadvantages have been greatly exaggerated, however, especially in England. The gravest accidents have been attributed to it—the rupture of the uterus, for example. This is evidently an exaggeration; but it is not the less true that this manœuvre demands great prudence, and that it should be practiced with care, and with a knowledge of the accidents which may result from it.

I shall now pass to another class of remedies, to which I have heretofore only alluded I refer to the remedies known as refrigerants, which may be applied either around the patient or directly to her person.

The first thing which should be done when a woman is seized with uterine hæmorrhage is to renew the air of her chamber and to lower its temperature. In winter, this is especially useful, and is easily accomplished, because the temperature of the chamber is usually much higher than that of the external air.

In winter, ordinary cold water, and in summer, iced water, may be applied to the patient's person by means of moistened compresses applied to the thighs, vulva and abdomen. It is useless, and may even prove injurious, to use cold water internally. I think that cold intrauterine injections should be abandoned. It has been proposed to inject irritant and even caustic substances into the uterine cavity, but this practice is superfluous and often dangerous, and should be condemned. The introduction of the hand generally answers every purpose.

In those cases in which the application of cold to the external surface is inefficacious, we should introduce small sponges charged with cold water into the vagina, or, better still, small lumps of ice. This is an excellent method; it induces contraction of the womb, and, at the same time, diminishes the force of the circulation in the part; that is to say, it simultaneously fulfills the two principal indications in the treatment.

A condition indispensable to the success of refrigerant applications is that they should be renewed very frequently, not only in order that a low temperature may be preserved, but that a succession of impressions may be produced, the effect of which is peculiarly powerful. I may add that it is necessary to persevere in these applications for a considerable length of time.

Some accoucheurs have advised the pouring of cold water from a height on the abdomen of the patient; they believe that douches of this sort, in which the effects of shock are combined with the impression of cold, is most energetic, and as the cold water is continuously renewed by this method, refrigeration is kept up by a rapid series of impressions. This would be an excellent method if it did not involve the inconvenience of wetting the bed furniture. It is difficult to obviate this inconvenience, and I therefore think that it is best to employ the methods I first described, which suffice in the immense majority of cases, especially if they are combined with the introduction of ice into the vagina.

Compression has been recommended in those cases in which the means I have detailed are inefficacious. There are two methods of practicing compression, or two sorts of compression: The compression of the whole abdomen by means of a circular bandage; and direct compression of the aorta. When the latter method was first proposed, it was received with a sort of enthusiasm, and there are still a few obstetricians who recommend it above all others. Nevertheless, the direct compression of the aorta is not free from objections. Some of these will naturally present themselves to your minds. For example, it is evidently impossible to compress the aorta without compressing the ascending cava at the same time. On the other hand, compression being made above the point at which the renal arteries are given off, is it not to be feared that it is an ineffectual remedy, and that its effects are illusory? Thus, judging *a priori*, the compression of the aorta would seem to involve a serious inconvenience, and its advantages would be slight, and its results probably insufficient. It must be confessed, however, that experience has not altogether justified these objections. There have been many incontestable examples of the beneficial effects of compression of the aorta; and I myself, on one occasion, fortunately succeeded in arresting an alarming uterine hæmorrhage by this method. In my opinion, then, this plan may be occasionally useful. I will not at present express myself more explicitly on this subject; I will confine myself to safe generalities.

I have not enumerated, by any means, all the remedies which have been recommended in uterine hæmorrhage, and I have designedly omitted to do so. I wish to fix your attention at first upon the principal remedies; upon those which experience has sanctioned, and upon which you may rely. Nevertheless, you should not be ignorant of other means, which you may have occasion to employ; I shall speak of these hereafter. For the moment, permit me to sum up in a few words, the precepts which I have offered you.

I suppose that immediately after the birth of a child, you perceive that the mother is flowing more profusely than is well for her; this is the conduct which you should adopt. Your first care will be to deliver the placenta, unless this has been already done. If the hæmorrhage continues, you should open the windows and ventilate the room freely, and remove the pillows and place the patient flat on her back. If you find that the uterus is distended, you should introduce your hand for the purpose of turning out any coagula which may be contained either in the uterus or vagina, and immediately afterwards you should administer ergot, and at the same time apply cold compresses about the thighs and genital organs. Lastly, if in spite of these precautions, the hæmorrhage continues, while persevering in the remedies already employed, you should introduce pieces of ice into the vagina.

In the immense majority of cases, and except in very rare exceptions, by the combined use of these means you will succeed in arresting uterine hæmorrhages.

LECTURE III.

At the last lecture, I described the measures which are most commonly adopted in combatting puerperal hæmorrhage, those, in fact, which almost all accoucheurs employ; there are many others, however, and although in most cases, if not in all, you may rest contented with those I have detailed, it is well that you should be acquainted with others, to which you may sometimes wish to have recourse.

Recollect, in the first place, the two principal objects which the accoucheur should ever have in view in treating hæmorrhage from the uterus, and the two indications which all his remedies should subserve, viz: to induce contraction of the womb, and to moderate the uterine circulation. You have learned that the first indication was fulfilled by two remedies: the ergot and the introduction of the hand. In addition to these, authors have recommended the injection of different liquids into the uterus, some cold, some acid, some almost caustic. Thus it has been proposed to use injections of diluted sulphuric acid. I have already condemned these injections; most of them are dangerous, and even supposing that they are innocent, they are not preferable to the introduction of the hand. This manœuvre almost always produces the contraction of the womb. If it does not, it may be repeated. I have never been obliged to repeat this operation more than twice, so far as I can remember; it may be done oftener, if it is necessary, without any danger or inconvenience, provided it is performed with the requisite care and precautions.

A distinguished accoucheur has proposed to combine the two modes of action of liquids and solids, by introducing a peeled lemon into the uterus and squeezing it and then leaving it in its place.

Independently of these different methods, electricity has been suggested. In England, particularly, various attempts have been made to apply this agent in the treatment of uterinehæmorrhage. It may be of some utility, but it cannot be employed with facility in private practice, for the necessary apparatus is not always at hand; this remedy at the very utmost, is adapted to hospital service. Moreover, the employment of electricity is not exempt from difficulties. I shall describe these hereafter, when I come to speak of premature labour; at present let it suffice for me to observe that electricity, being an agent which acts principally on the contractility of tissues, does not completely fulfill the ends which are sought.

Long ago, experiments were made in regard to the effects of applying cups upon the breasts. It was thought that by removing the pressure of the atmosphere and causing a congestive movement towards the mammæ, contractions of the uterus would be produced, in consequence of the physiological synergy which connects these organs. We know, in fact, that suction of the breasts produces in some women a certain excitement of the womb, which, in some cases, has even caused hæmorrhage, (a result which would seem antagonistic to the end proposed,) but which usually induces simply contraction of the uterus.

We now come to the second indication: the diminution of the vascular excitement.

I have said that this indication was fulfilled by refrigerants and by compression. You must permit me to make some further observations upon refrigerants. I have said that these remedies were applied externally and internally; you now know my opinion of the latter mode of applying refrigerants. There is still another plan for producing refrigeration, which consists in the ingestion of iced drinks into the stomach. You will find this method recommended in Yvans. In my opinion, this remedy *alone* is quite unimportant, but I consider it a useful adjuvant to external refrigerants. I may say as much of refrigerants introduced by the rectum. It is simply as accessories that these means have any value; by themselves they are insufficient and useless.

Opium has been proposed as a useful auxiliary in the treatment of puerperal hæmorrhage. It is recommended in an English work translated by Madame Boivin. It is also highly spoken of by Rigby and by Duncan, who pronounce it one of the best agents for arresting hæmorrhages. For my part, I believe that it is a far less useful remedy than any of those which I have described in the preceding lecture. These means, moreover, have been sufficient in every case in which I have employed them, and I have never had occasion to resort to opium.

Apart from compressing the vessels, it has been advised that the uterus itself should be compressed by an appropriate bandage. There is this grave objection to such a bandage: it prevents us from ascertaining the condition of the uterus. I am sure that you would be greatly perplexed, if you were unable to examine the womb through the abdominal walls, to determine whether it was contracted or distended. This plan of treatment, moreover, has not, in reality, the importance which some authors have assigned to it.

Finally, it has been recommended to compress the aorta through the uterine walls; and, strangely enough, persons have even advised compression on the internal surface of the uterus, at the point of insertion of the placenta. This last proposition is evidently inexecutable, and astonishes us the more because it emanates from a most judicious and experienced obstetrician, Professor Budge, of Bonn.

Next comes the tampon. All rational physicians, it appears to me, consider the tampon dangerous. It inspires a false security, by suppressing an external hæmorrhage, and substituting for it an internal hæmorrhage, the gravity of which cannot be estimated with precision. The tampon obliterates the vagina only; no one has ever dreamed of pushing it into the uterus. Now, I repeat, that in obliterating the vaginal cavity we only convert the apparent into a concealed hæmorrhage.

You will hear, however, from inexperienced professors, that the tampon is a good means of arresting uterine hæmorrhage. An accoucheur of Dijon, M. Leroux, has published cases designed to demonstrate the efficacy of the tampon. But Dr. Leroux did not use a true tampon in the cases which he describes in his memoir, but a cloth saturated with some stimulating liquid. The arrest of the hæmorrhage in these instances, therefore, may be as fairly attributed to the action of the stimulating liquids with which the cloths were saturated, as to the mechanical action of the tampon itself. It is probable, in fact, that the uterus contracted in these cases, in consequence of the stimulation, and that this was the true cause of the cessation of the hæmorrhage. Even this mode of action cannot be relied on, for we know that hæmorrhage sometimes continues after the womb has firmly contracted.

The tampon can be applied with advantage in uterine hæmorrhage, but not in those conditions which we are at present considering. When hæmorrhage supervenes sometime after labour, and the womb is firmly contracted, tamponnement will effectually put a stop to the bleeding. Thus, on yesterday, I checked an hæmorrhage in a case of cancer of the cervix uteri by plugging up the vagina. But in such cases as these, the conditions are entirely different from those of metrorrhagia occurring in the puerperal state.

Lately a proposition has been renewed, which, at another epoch, made some noise. This is to insert an empty bladder into the uterine cavity. When once introduced, the bladder is expanded with air, so as to fill the entire cavity of the womb. It is thought that this compression from within outwards over the entire intra-uterine surface, will suffice to arrest hæmorrhage.

I remember, that when I was quite young, an amateur physician named Rouget pursued the practice of inserting a hog's bladder into the womb and then blowing it up, and advocated this plan of treatment with singular tenacity. His plan did not meet with a favourable reception from his brethren, and my father, particularly, condemned his ideas. He, therefore, vindicated it in a book, which he dedicated to the commander-in-chief of the army of Italy.

It is evident that this is a miserable plan, for it opposes the contraction of the uterus, on which the cessation of the hæmorrhage principally depends. Yet this idea has been recently resuscitated in a memoir addressed to the Academy of Medicine, on which no report has hitherto been made.

I return to a more important question. I have spoken of refrigerants as most effectual remedies, which we must very constantly employ in the cases we are considering. But you will easily conceive that if it became necessary to maintain the action of this class of remedies, serious inconveniences would result from their prolonged application. As soon as the hæmorrhage ceases, therefore, these applications should be removed at once, and the patient should be warmed. But you should take care to apply warmth without moving the patient or changing her bed. If the hæmorrhage has been abundant you cannot move the patient for many hours without exposing her to danger.

When may you leave the patient? Can you retire a few minutes after the hæmorrhage has ceased? No, beware of doing so! Remain for upwards of an hour with your patient; or, if you live in the country, at a distance, remain for several hours, for the hæmorrhage may recommence during the first hour, or even during the second, and you cannot feel complete security on this point until many hours have elapsed.

Finally, remember that a woman who has suffered from puerperal hæmorrhage is not in the same conditions as other newly delivered women. She almost always has fever. Do not take this fever for a symptom of some morbid state; it is a salutary fever, a fever of reaction. Moreover, women, after this accident, are usually left in a state of extreme feebleness, and ordinarily have intense headache. I will say of this what I said of the fever—don't regard it as a symptom of morbid action, and beware of attempting to relieve it by bloodletting. When there is but little blood in the vascular system, when spanæmia is present, there is a great tendency to local congestions. Women who have lost blood copiously from the uterus are, in this respect in the same condition as those anæmic subjects who suffer from cerebral congestion and intense headache. Therefore, I repeat, beware of bloodletting, under these circumstances, for it will only increase the evil by augmenting the tendency to the symptoms you propose to combat.

(To be continued.)

II. *Lectures on Fever.* By WILLIAM STOKES, M. D., *Regius Professor of Physic in the University of Dublin.*

LECTURE II.

I stated in the Introductory lecture, that since the period when I lectured on fever, as one of the subjects embraced in a systematic course, my views on that disease had been altered. In order to prevent misconception, it is necessary that we should return to this point.

By referring to the American edition of my lectures on the Practice of Medicine, published in 1837, it will be seen that I had insisted on the doctrine of essentiality, and that I combated those views of the Continental pathologist which referred fever to a local and an inflammatory cause. On these great points, no change has taken place in my opinion. I do not claim any credit for the doctrines I then taught and still believe, for they were then held by most British physicians; and I am glad to observe, that the state of opinion on the Continent on these questions is fast approaching to that which has been so long held in these countries. The frequency and importance of the local lesions were maintained by me in 1835, and to this doctrine in general we still adhere.

In what respect, then, you will ask, have my opinions altered? I answer, that it is in the view we should take of the relation which inflammatory action has to the local diseases in fever; and, again, as to the amount of influence which these local affections may be supposed to possess, in inducing a fatal termination of the malady. Although we formerly held that the local alterations were secondary to the fever—that they were really symptomatic of the fever, not the fever symptomatic of them, as Broussais taught—yet we did not sufficiently recognise the fact, that in most cases the inflammatory action associated with them was itself secondary to the local lesion—that it was re-active, and, as such, had probably less pathological value than the local change which preceded it.

Again, the opinions which were then inculcated as to the influence which the local diseases had in causing a fatal result must be in at least two respects modified. I formerly was of opinion that death in fever was mainly to be attributed to the virulence or number of the local diseases. Such is not my opinion now; for although in examining the bodies of many patients who have died by fever we find various local alterations, yet they are often insufficient to account for death. And we have had abundant proofs that the typhus state itself may cause death, without there being any manifest local disease in any part of the system.

In another, and seemingly opposite point of view, our opinions have changed. For I think, that so far at least as the lungs are concerned, we did not sufficiently estimate the danger produced by the local disease independent even of the re-active inflammation. To this point I shall hereafter draw your attention more fully. We too exclusively considered the local affections as inflammations, though secondary to the fever; and did not sufficiently admit them as special typhus lesions or deposits, which might occur without any inflammatory action, or precede it.

To sum up, then; whatever be the changes that may have occurred in my opinions about fever, they are rather developments of the doctrine formerly taught than its rejection, or the substitution of any essentially opposite view. In all points relating to the essentiality of fever, the influence which the law of periodicity exerts upon its phenomena, the secondary nature of its local affections, and, lastly, its contagious character, my views remain unchanged. But on those points to which I have already alluded, the alteration of our views is important as bearing on practice, inasmuch as it points more decidedly to the adoption of a treatment directed to the general more than the particular or local condition, and again to the more liberal employment of the tonic and stimulating treatment in the typhus of this country.

You will easily anticipate the general result of the views which I now attempt to teach you. They have led us to attach less importance than we did formerly to the inflammatory state in fever; that is, to the condition that indicates an antiphlogistic treatment in the ordinary sense of the word. In the use of stimulants we have become much more bold, even under a great variety of circumstances. But I must say, that with reference to the employment of wine in large quantities, we have been drawn to this mode of treatment less from any theory than from simple and accumulating experience by which we became less and less timid in the use of stimulants. Observe here, how a truth in pathological anatomy may be foreshadowed or anticipated by observing the effect of a therapeutic agent.

We considered at our last lecture the general nature of fever, and you will recollect that I impressed upon you, as the foundation of the entire subject, that, when we compare fever with a large number of the diseases catalogued in books, we find this great difference—that, while the great majority of these latter diseases have an anatomical character, fever is wanting in an anatomical character. We may, then, you will readily see, divide all diseases into three great classes.

In the first class we have diseases which have an anatomical character—diseases to which we can give an anatomical expression. I need not occupy your time in giving examples of this class of diseases.

In the next place, we have a most important class of diseases, which have no anatomical character, and yet they are not fevers. I allude to the *neuroses*, or, as they are commonly termed, nervous diseases; of these, mania, epilepsy, lock-jaw, hydrophobia, hysteria, chorea, convulsions, are familiar instances. Here we have some most remarkable diseases, which have not any anatomical character; that is to say, we cannot show that they depend upon any known or ascertained anatomical change of any portion of the system, including the brain, spinal marrow, and nerves. The general character of this singular group of affections, which we call *neuroses*, shows that, whatever be the nature of the disease, the seat of it is in the nervous system; but, in the present state of anatomical knowledge, we are not justified in saying what the condition of the nervous system is to which they owe their origin, or whether it is an organic change at all. Even the results hitherto obtained by the microscope have been chiefly negative; the microscope has added but little to what was before known on those subjects. I may state here, lest you should fall into a misapprehension, that I do not wish you to believe that in none of those diseases do you find organic change. The fact is, that in many of them you do; but, when you to come enquire what those organic changes are, you find that they are so inconstant, so variable, frequently so similiar in opposite diseases, that they altogether fail in throwing any positive light upon the subject.

This, then, is the second class of diseases; the first class having an anatomical character, the second having no anatomical character. Now, we come to the third class, which comprises fevers. Fevers as we have already said, have no anatomical character,—then you will say, " How do they differ from the neuroses?" As far as we know, and strictly speaking, they differ very little; but, there is this feature connected with them, that fever seems to be a special condition of life which is to exist for a certain time, and then to cease,—that is to say, it is under the law of periodicity; and, in this respect, the phenomena of fevers differ very much from those of the pure neuroses. There are other differences, too, between fevers and neuroses. It is quite true, that in a large number of fevers, death may take place without any organic change that we can demonstrate anatomically; but it is true, on the other hand, that in a large number of cases, there is a tendency to the development of what I designated at our last lecture as the secondary lesions of the disease. Thus, if we compare these two classes, the neuroses, which are not fevers, and the fevers, properly so called, we find this great difference, that among the former, as for example in hydrophobia, we do not see any tendency to the development of ulcers of the intestine; nor in epilepsy do we find any tendency to the development of bronchial diseases; nor in mania do we see a cutaneous eruption; nor in convulsions do we find any of these various organic changes produced. This tendency, then, to generate or produce local anatomical changes secondary to the fever is another remarkable distinction between this class of affections and the pure neuroses. There is a third very remarkable distintion between them. Fevers—using the term in a general sense, embracing, as I told you at our last lecture, a great number of diseases, as the exanthemata, typhus, plague and yellow fever,—are capable of being transmitted by contact or by vicinity, and a great many of them are contagious. So that in their subjection to the law of periodicity, in their liability to generate or produce various organic changes in different parts of the system, and in their transmissibility by contagion, we have three very important distinctive characters, although we cannot reduce them to an anatomical expression.

A great deal has been written on the subject of the proximate cause of fever, and theory upon theory has been promulgated on this subject. We are, however, at this moment, just as ignorant of the proximate cause of fever, as we were in the time of Cullen, or even long before him. We do not know what the proximate cause of fever is; but if we look at the entire phenomena of fevers, and enquire what views we may safely hold at present, forwant of a better doctrine,—for it may be, that, in the progress of pathological science, the proximate cause of fever will be discovered; and itis quite possible, I might even say, probable,—when, I say, we deal with the expression of the actual state of our knowledge, we are justified in stating that fevers are the result of the introduction of a poison of some kind into the economy. The whole of the phenomena of poisoning by organic màtters seem to point out a close analogy between fevers and those diseases in which a poison is introduced into the system. If a man who is in perfect health is exposed to the contagion of syphilis, in a short time his system becomes a laboratory for the formation of syphilitic poison, and he is capable of communicating the disease. As far as we can form a judgment in this question, we may say, that there is a very close analogy indeed between fevers and these diseases, whether they be fevers which are the result of contagion or not; and in this way we see a connecting link between fevers, which we call acute diseases, and diseases which are neither acute nor febrile. Thus, for example, we do not say that a patient who is labouring under syphilis, which he has caught by contagion, is in fever; but he is, nevertheless, under a condition, which, as far as the chemico-vital state of his body is concerned, is somewhat analogous to fever, that is to say, his system has received a poison, and having received that poison, it seems to work upon it, or the poison to work on the system, and the result is, that the system becomes a generator of the same poison that it had received. Now, let us go a little farther into this subject. I might give you various other illustrations; and, indeed, I think you will find, that some unexpected analogies will arise in this matter, and that you will even perceive an analogy between two such opposite diseases,—such dissimilar diseases as typhus fever and pulmonary consumption. For there can hardly be a doubt, that, under certain circumstances, tubercular matter introduced into the system acts like contagious matter, and that it produces a development of tubercular disease in the system thus infected. Such cases, then, may be considered as examples, if you will, of very chronic fevers, long-continued fevers, and fevers which are not, apparently at least, under the influence of the law of periodicity. I am perfectly persuaded that the more we study that class of diseases, which seems to be general rather than local, we will find that the possibility of contagion will be more and more exhibited. I am strongly of opinion, that almost all the febrile diseases are contagious—that is the essentially febrile diseases—and I think it certain that there are other diseases, also, which we do not call fevers, that are contagious. It is hardly possible to doubt the contagiousness of cholera; and we may go still further, and extend the possibility of contagiousness even to such diseases as tubercular affections, and perhaps even further.

Now, let us examine what are termed the Exanthemata, Measles, Scarlatina, and Small-pox. These diseases are, in all essential conditions, fevers. An individual in perfect health is exposed to a certain exciting cause, and he gets a general illness, which exhibits phenomena referrible to the law of periodicity. How do these diseases differ from typhus fever? They seem to differ in this, that their local phenomena are more constant, and that they are probably more uniformly contagious. The contagion of small-pox, of scarlatina, and of measles, is a recognised and established doctrine.

We know that scarlatina is generally constant in its phenomena,—that measles is constant in its phenomena,—that small-pox is constant in its phenomena, and especially in the phenomena of its secondary change,—so much so, that the secondary change is taken as a distinctive mark of the disease. These affections are probably, as I said before, more directly contagious; and this, perhaps, may arise from the circumstance, that the matter of contagion, in these cases, is more elaborated,—is perhaps more perfect; and the patient who contracts the disease is very much in the same position as a person who contracts syphilis; that is to say, that an organic poison of a special kind, whose essential characters, however, are so subtle as to escape chemical investigation, has been presented to his system, and has affected him. The phenomena of continued fever are more variable; and this may arise from the want of constancy in the exciting cause. We hardly suppose a man to get small-pox unless he has been infected by another who has had small-pox. But continued fever, or typhus fever, seems capable of being produced by a great number of causes, or—if I may so speak—by a number of imperfectly-developed or imperfectly-acting causes, and these, of course, may be infinitely various. We also see this very curious difference between typhus fever and the exanthemata,—that while, among the exanthemata, the one exciting cause always produces its own peculiar disease, the exciting cause of small-pox producing small-pox, the exciting cause of scarlatina producing scarlatina, the exciting cause of measles producing measles,—this does not seem to be the case with respect to fever. For here is one of the most important and interesting facts connected with the entire subject, that the same exciting cause—at least as far as we can see of it—is capable of producing different kinds of fever in different persons. This great fact has not been sufficiently dwelt on by the various writers on fever, on the Continent and in England, especially by that class of men whose object seems to have been to make themselves classifiers of diseases,—makers of classifications,—at which nature laughs.

Here is another of the great facts which show the impropriety of attempting to draw lines of distinction between what are termed the *typhus* fevers and the *typhoid* fevers—that the one exciting cause will in various persons produce the two diseases. Now, we see nothing of this sort in the exanthemata. What may be the reason of this it is difficult to say; and we explain it very often by expressing the fact in different words. It is supposed that it may be due to some variation in the state of *receptivity* of the body at the time. For, in the production of the effect of the poiosn, there are two elements; first, the nature and composition of the poison which is to act; and, next, the chemico-vital state of the body which is to be acted on. The two causes combined produce the result—fever. But if, the cause being the same, the bodies be in different states, we may expect different kinds of fevers; and this is all that we can say on the subject.

Now gentlemen, we come to another very important matter connected with fever, and rendering this affection remarkable, as compared with the pure *neuroses*, and also as compared with the anatomical diseases; and this is the subject of contagion, on which so much has been said and written.

In a course of lectures such as the present, the teacher should never omit any opportunity that may offer, to impress on the minds of his pupils some general rules for their conduct through life in the practice of their profession.

And here I would take the opportunity of saying, that I would advise you all, never to range yourselves among the advocates of an exclusive doctrine. Do not, therefore, as far as fever is concerned, range yourselves either among the contagionists, or among the epidemists, or among the non-contagionists. The very moment a man ranges himself in the ranks of other men who are fighting for a particular doctrine, he places himself in a false position. His mind is occupied with the excitement of controversy rather than with the search for truth. He becomes an advocate, he ceases to be an inquirer; and the very moment that this change occurs in the mind of the Medical observer, he loses, or ought to lose, caste in the ranks of science.

In looking at the subject of contagion, it is very true that the contagionists will present you with an enormous array of facts, and the non-contagionists will present you with another vast array of facts. The contagionists will show you a great number of cases where fever has been directly communicated. The non-contagionists will show you a number of cases where this circumstance did not occur. Now, in one sense, you may say, that the doctrines of both are true; in another sense they are both false. There can be no doubt that disease has originated, and may originate, without contagion. This must be obvious to every man. The primary development of disease must have been without contagion. This is quite obvious.

Again, we see a vast number of cases in which disease is endemic. I need scarcely allude to the common case of ague. There are certain districts where ague is constantly produced, and where, if a man who has not had ague comes, and is not in contact with any human being whatever, he will, almost certainly, get ague. Here, then, clearly, there has been disease independently produced, or at least without *human* contagion. There are certain districts in South America, certain districts in the West Indies, vasts districts on the coast of Africa, vast forest districts in Hindostan, where, if a man sleeps for a single night, although we will suppose him to be alone, without any companions but the wild beasts of the forests, that man will get some form of fever. It is a fact that cannot be denied. Then we see the epidemic of influenza; we see also—if you look at the history of Medicine—unquestionably even within the later periods of the world's history, the appearance of new diseases, totally new diseases. So that we cannot at all deny that disease may be generated, and that it may spread without the intervention of human contagion. We must believe, I say, in the spontaneous origin of diseases under some exciting cause; but that exciting cause need not be human contagion. On the other hand innumerable facts show, that fever existing in the system is capable of being propagated from one man to another; that it is, in fact, a contagious disease in the strictest sense; and this transmission of the disease may be not merely by contact, but by vicinity. Now, the facts which we must rely on to impress this doctrine of contagion on your mind, when you come to examine them, will appear less direct than you might suppose. A great number of men who have written on this subject, really were but ill-instructed in the rules of logic, and they have not been trained to think properly and exactly on the subjects they were considering. For instance, it was a great object with a number of the French school, especially those men who were the disciples of Broussais, and advocates of the physiological doctrine, to establish the non-contagion of disease. For the doctrine of contagion implies, you will see, essentiality; and the physiological doctrine was opposed to all essentiality. According to the physiological doctrine, there was no such thing as essential disease. Every disease was local and inflammatory. Therefore, in their anxiety to overturn essentialism, they found this outwork, as it were of contagion which should be carried. And nothing can be more singular, or, I may say, heroical, than the efforts which a number of the French physicians made to establish the non-contagion even of the most contagious diseases. Many of them went out to the Levant and exposed themselves purposely to the contagion of plague; put on the clothes of persons who were labouring under the plague; slept in the beds with plague patients; inoculated themselves with the matter from the buboes of persons labouring under plague, in some instances actually inoculated themselves with the blood of plague patients. Well, in many cases, these experimenters did not take this plague; and this fact is still relied upon by many of the French school as a proof of the non-contagion of plague and of fever generally. But you will at once see how very inconsequential these experiments are. Here are four or five cases of failure of contagion, and as well might you argue that corn does not grow from seed because the grain sown in the earth will sometimes fail to produce the plant. I may state here, however, that some of these investigators paid the terrible penalty of death in their zeal for science, for they did take the plague, and were lost.

Among the direct facts which satisfy our minds as to the contagious nature of fever is the operation of contagion in large masses. I need hardly here allude to the singularly forcible argument in favour of contagion which may be drawn from the frightful mortality of our Irish Medical brethren in the years 1847 and 1848. This subject I have already alluded to in the theatre of the Meath Hospital, and it is one which we can hardly look back upon without shuddering. The simple fact alone of the mortality of that class of individuals who are most exposed to the disease, furnishes an argument in favour of contagion which we would but weaken by any observations upon it. There is another curious mode of dealing with the indirect evidence for contagion, to which I shall now draw your attention. You all know that Professor Louis, of Paris, has founded what he terms the numerical system of medical investigation; that is to say, he has attempted to reduce the facts of medicine to numerical expression; so that we would be able, as he supposes, to make medicine an almost exact science. Perhaps at some future period I will draw your attention more fully to the advantages and the disadvantages, to the possibilities and the impossibilities of the numerical system of Louis. My opinion, I may state, generally speaking, on the subject is, that, for the establishment of all that part of medicine which consists in establishing the data of physical diagnosis, the frequency or infrequency of certain pathological changes and matters of that kind, the numerical system is infinitely valuable; but that we cannot, or have not yet been able to apply it to furnish rules of treatment. For the object of the numerical physician and the object of the practical physician—if I may make use of such a distinction—are different. The object of the numerical physician is to ascertain a rule of treatment which will cure the greatest number of cases out of a given number; but that should not be your object, or that of practical physicians. It is very well to know that such results have been obtained; but it does not follow that you are to act on them. Your object is, not blindly to adopt the formula founded on numerical data when it is shown that by its use you can cure the greatest number out of a given number; your object is to cure the diseases of A, B, or C, as they may come before you. And you are not to neglect what you believe to be right in the case of A, B, or C, because you have this array of figures declaring to you that such and such a course, different from that you may be about to pursue, is the rule for saving the greatest number of lives out of a given number. But we may safely use numbers in a different way—as, for example, investigating the data of a particular doctrine.

My father, when Professor of the Practice of Medicine in the Royal College of Surgeons, directed his attention very much to the subject of contagion. He was a strong advocate of the doctrine of contagion. Perhaps he went too far in his belief in the exclusiveness of the doctrine of contagion. Perhaps, also, he went too far in denying the doctrine of the epidemists, or the non-contagionists. However, that has nothing to do with the present question. He thought, that, in looking at the general circumstances which attended the spread of an epidemic in this country, the probabilities for or against the doctrine of contagion might be submitted to calculation. One of his most intimate friends was the late celebrated Dr. Brinkley, Bishop of Cloyne, who was at one time the Astronomer-Royal of Ireland. He was admittedly one of the very first mathematicians of his day, and was especially skilled in that difficult part of mathematical investigation, the doctrine of chances. Now, in the progress of an epidemic in Ireland, (and doubtless, also, in other countries,) in a family of twelve persons, the disease has been known to attack eleven out of the twelve. In some cases, the passing of the fever through so large a proportion as eleven individuals out of twelve, has taken a very considerable period of time, as you may readily understand. It has taken about three months to go through them all.

Now, my father proposed these two problems to the Bishop of Cloyne, for solution :—

1st. "An epidemic prevails so severely, that one person out of seven sinks. A family of twelve is selected in a particular district, before the epidemic has visited it. What is the chance that eleven out of that family shall take the disease, supposing the sickness of one of the family does not promote the sickening of another,—that is, supposing the disease not to be contagious, and supposing the family to be not unusually liable to the disease ?"

The answer furnished by Dr. Brinkley is, that the probability against such an event is 189,600,000 to 1. That is a very singular and extraordinary result.

2nd. "The same general conditions being assumed and also that the number of inhabitants of a district is 7000, what is the chance that, in a family of twelve within the district, eleven will sicken.

Answer : "The chance then is 300,000 to 1 that no family of twelve persons, in a population of 7000, will have eleven persons sick."

These numbers furnish proofs so convincing of the truth of the doctrine of contagion, that it is hardly necessary to go further. The facts on which they were based are ascertained facts ; they have been common facts in epidemic fever ; but, recollecting that they were common facts, the chances against their happening, if the disease were not contagious, would be 189,600,000 to 1 in the one case, and 300,000 to 1 in the other.

LECTURE III.

I told you in our first lecture, that we knew nothing of the proximate cause of fever. In this respect, however, fever is not singular ; for we know little of the proximate cause of any disease. Practically, fevers are divided into the essential and the symptomatic fevers. I need not describe to you what is meant by these terms. I showed you, in our first lecture, that among essential fevers we must reckon a great variety of diseases. All the exanthemata are essential fevers ; influenza is an essential fever, typhus, typhoid fever, intermittent fever, remittent fever, the plague, the yellow fever, are essential fevers ; and, I believe, we might also add cholera.

We will not attempt to define fever. We may, however, describe it as a morbid state of the system, which is under the law of periodicity. This morbid state is capable of destroying life without the production of any known anatomical change. You must take this with you as the basis of all your views of fever,—that, in the present state of knowledge, we have no anatomical expression whatsoever for the disease. Even with the assistance of the microscope, the result, as far as fever is concerned, is very much the same as that with regard to the neuroses. We have not yet, even with the assistance of the microscope, been able to discover the anatomical character of fever. However, although it is capable of destroying life without any known anatomical change, we find that it frequently does produce changes in organs, and those changes, when once produced, influence the character of the fever. They not only influence the character of the fever, but they themselves may be the cause of death. To give you an example of a local affection influencing the character of fever, we may refer to the affections of the abdomen or the chest; if the local affections are confined to the belly, we shall then have a peculiar character of fever. We shall have the belly swelled, diarrhœa, thirst, and a variety of other symptoms. Again, if the local symptoms are predominant in the chest, we shall have livid countenance, difficult breathing, and the conditions which result from imperfect arterialization of the blood. Again, the same observations will apply to cases in which the nervous system is engaged—symptoms of diseases of the brain may be developed. A diseased intestine may be the cause of death by exhaustion, the patient sinking from diarrhœa; or an ulcer of the intestine may perforate the peritoneum, and he may be suddenly attacked with peritonitis, which is the cause of death. Again, a secondary bronchial affection, or congestion of the lung, may go on to such a degree as to destroy life by asphyxia; and this is not an uncommon case in individuals whose bronchial disease has been neglected in the course of the fever. A very extensive experience justifies this conclusion, that in a large number of those cases of fever which we find in the records of medicine, where death took place by what is called effusion into the chest, and where that effusion is attributed to debility or exhaustion, the real explanation is—that those patients had for a long time, before their death, a progressive secondary disease of the bronchial membrane, which was overlooked and neglected, and when it rose to its height, attention was drawn to it when it was too late.

Now, let us consider the local symptoms of fever. We find that these are of several kinds. One class of them may be termed, for want of a better name, neurotic or nervous—that is to say, singular phenomena of functional alteration occur without organic change. I believe that there are none of the great organs of the body which in fever may not exhibit this curious class of symptoms. In connexion with the brain, we have delirium constantly, as a neurotic condition in fever; pain as a neurotic condition, convulsions as a neurotic condition; coma, and so on. If we go to the thorax, we often find cough and accelerated breathing without any anatomical change of the lung. If we turn to the abdomen, we find many of the symptoms which are attributed to actual anatomical disease, yet they may exist altogether independent of it. We find great tenderness of the epigastrium, and yet no gastritis, no peritonitis, no inflammation of the liver. We find swelling of the abdomen, without any anatomical disease; we find diarrhœa without any anatomical change; and so we observe, that there are none of the great organs that may not occasionally exhibit those curious conditions of symptoms depending upon functional alteration. This is the first class of symptoms. The next class includes those which depend on special anatomical change. We may have this change in the brain; we may have it in the lungs; we may have it in the heart, in the spleen, or in the glands of the intestine. In the lungs, we recognize it by râle, cough, expectoration, the filling up of the tubes with muco-puriform matter, and, on dissection, tumefaction of the mucous membrane, attended by lividity, vascularity, softening, or even ulceration. In the heart, we find it accompanied by signs of softening of this organ, generally speaking, confined to the arterial or systemic heart. Many of you are no doubt familiar with the local changes which occur in the spleen and in the intestine.

Then we come to the third class of local affections in fever, and this is a very curious and important one. The condition of the parts here is, as it were, a compound condition. The organ is supposed to have suffered infiltration of what is termed the typhoid matter; it has become swollen and enlarged. This is a condition which is capable of retrocession, without any consequent injury to the part; but in certain cases this retrocession does not take place, or it is interrupted by actual inflammation of the tissues which are thus infiltrated. Thus, we have three very important classes of local affections, which, though organic at first, are not inflammatory, but which become complicated with a secondary or reactive inflammation. There is, I believe, a fourth set of local symptoms, or of local affections if you will, in fever, which has not, perhaps, received sufficient attention. I think it is extremely likely, that, in certain cases, we have organs suffering from want of a natural supply of blood; and that this is extremely likely to take place as far as the nervous system, at all events, is concerned. Any of you that have turned your attention to the subject of the fatty degeneration of the heart,—so often brought before the Pathological Society of Dublin,—will recollect, that one of the most remarkable symptoms of this affection is, that the patient is liable to repeated and extraordinary attacks of nervous disease; and nervous disease shown by frequent attacks of syncope, or by apoplectic attacks continually repeated, very often without consequent paralysis, but in some cases with paralysis. This is an illustration of the development of extremely important nervous symptoms, not from fulness or congestion of the brain, but from an anæmia of the brain; and it illustrates the great pathological proposition—it is one of many illustrations of it—that similar symptoms, or nearly similar symptoms, may arise from essentially opposite conditions. We know that apoplexy and paralysis frequently arise from hæmorrhage into the brain; we find that they also arise from anæmia of the brain. In the disease to which I so long directed the attention of the classes in this Hospital—the typhoid softening of the heart—there is a great probability, indeed, that the brain, under those circumstances, suffers from anæmia; and it may be—though this is a point which has not been at all sufficiently worked out—that many of the extraordinary nervous symptoms in fever, to which we can assign no anatomical cause, really proceed from an anæmic condition of the brain, the result of a temporary softening or weakening of the left ventricle; in fact, that in typhoid fever there is produced, for a certain number of days, the condition which is seen as a chronic state in the fatty degeneration of the heart. It requires very little acumen to perceive, that if the brain is liable to this fourth and curious set of local disturbances, other organs may suffer in the same way. This is a subject which at present is by no means worked out. I merely throw it out for your consideration. But we might enquire, whether the tolerance of wine in typhus is in any way to be explained by an anæmic state of the brain. There are few things more curious than the power which is shown by patients in typhus, of bearing a quantity of wine or brandy without intoxication. They will often swallow many times more wine than would make them quite drunk, if they had not typhus; and wine becomes a sedative, rather than a stimulant, so far as symptoms are concerned. Does not this indicate a state of the brain the opposite, in some respects, to that of health? I do not want you to believe that all the good effect by wine is derived from its action on the weakened heart; for it may be, that the direct influence of the stimulant itself on the nervous matter may be a cause; but, whether we take in one or both modes of action, its effect indicates a condition of the circulating and nervous systems the opposite to that of inflammation, as we understand the term.

We come now to announce this very important proposition, that the condition of fever, or, if you will, the poison of fever, is capable of producing local symptoms without organic change. We can understand the poison of fever producing a general fever without any local symptoms; that is easy enough to be understood; but it requires a good deal of teaching and observation to persuade men that the poison of fever is capable of producing local symptoms without any organic change. It is quite impossible to exaggerate the importance of this proposition as a guide in the practice of Medicine, for it is because this proposition has not been sufficiently accepted,—because it has not been engraved upon the minds of the Medical and Surgical students, that so much mischief is done in the treatment of fever. There is one grand rule, and, if you did nothing else for the whole of the session but learn it, your time would be well spent,—and it is this, that those rules of diagnosis of local diseases which are to be accepted as true in cases which are not typhus fever, lose their value to a great degree when the disease is typhus fever. This applies to the local symptoms in connexion with the three great cavities. You are not to apply the rules of diagnosis, drawn from the observation of diseases which are not fever, to the symptoms in fever, because fever is a special, essential state, and has its own conditions and its own rules. And this confirms the observation which I made in the Introductory Lecture, that the student, no matter how extensive his education may have been in Surgery, and in Medicine outside a fever hospital, has really only learned half of his business if he has not studied fever at the bed-side. In consequence of ignorance of this rule, men having a case of fever, with symptoms which, they had been led to believe, in cases not fever, were indicative of local inflammation, at once proceeded to treat the case as one of local inflammation.

The patient on the 10th or 12th day of typhus fever is watchful, delirious, violent, complains of great distress in his head, and so on. Well, what does the practitioner do, who has not learned this rule? He shaves the head; he applies ice to it; puts on a dozen or two of leeches, and what is the result? The result too frequently is, that the patient dies rapidly. The symptoms in this case were not the result of inflammation of the brain; they were not the result of hyperæmia of the brain. There was, perhaps, an exactly opposite state; at all events it was not such as to require depletion; the patient was suffering under general debility, and he sinks under the doctor. This is still a common case. I have seen applications of leeches to the head in an advanced stage of fever with delirium, almost as certainly fatal as a pistol shot through the brain would be. Here let me give you the observations of Louis, illustrative of the actual value of the symptom of delirium, as an indication of inflammation of the brain in fever; and I may mention here, that as Louis' observations were drawn from the Continental typhoid fever, they must be considered as still more applicable to our disease; because in the Continental typhoid fever, there seems to be a greater probability that the local symptom shall be connected, or is really connected with local irritation than it is here. He took, in the first place, 12 fatal cases of typhoid fever, which did not present the symptom of delirium. In 4 of these cases he found redness of the brain, in 6 the brain was perfectly healthy, and in 2 there was slight softening of the brain. Now, let us take his 12 other cases, in which delirium was an extremely prominent symptom.—In many of them the patients were violently delirious. In 5 of these cases there was redness of the brain, in 5 the brain was perfectly healthy, in 1 there was slight softening, and in 1 slight injection. Now, compare these two sets of results, and see how extremely similar they are. Where there was no delirium 4 patients presented redness of the brain; where there was delirium 5 presented redness of the brain. Where there was no delirium 6 presented the brain perfectly healthy; where there was violent delirium 5 presented the brain perfectly healthy. The other cases may go for nothing. This result is extremely valuable indeed, as showing how very little we can depend upon the symptoms of excitement of the brain, as an indication of organic disease when the patient is in fever.

Now, let us go to some other organ,—take the heart. "Well," you will say, "the heart need not be taken, because in most of our cases the heart shows a depressed state, and not an irritated state." But there are many cases of fever in which the heart is violently excited, as you will have frequent occasion to see. What is the result of dissection in those cases of excited heart in fever? There are two conditions which, according to ordinarily received notions, should lead you to expect irritation or inflammation of an organ; first, that the patient has fever, and next that you have an organ in a state of great excitement. If the patient had not typhus fever, but had fever which was not typhus, and an excited organ, the chance would be, that that organ would be found in a condition of inflammation. If a man has fever which is not typhus fever, and his lungs are excited, we find bronchitis or pneumonia; if his pleura is excited, we find pleuritis, and so on. But here is a case of typhus fever, with extraordinary excitement of the organ, and when you come to dissect the parts you find the heart perfectly healthy,—not the slightest sign of disease is found; and the same observation will frequently apply to the digestive system. You will have tenderness on pressure of the abdomen, extreme thirst, nausea, and vomiting. Yet, on dissection, the mucous membrane will be found pale, and there will be no sign of disease. If a patient who had not typhus fever had a red tongue, or a dry and cracked tongue, if he had thirst, if he had vomiting and tender epigastrium, every one would say, this patient has gastritis, and, in all probability, he would have gastritis. But in fever, the state of the tongue is no sign whatsoever of gastritis; for each of you that has worked in the fever wards here must have seen that we are totally regardless of the condition of the tongue in the administration of the most powerful stimulants; and we find that one of the best modes of removing the redness of the tongue in fever is to give hot brandy, or large quantities of wine, or such stimulants as bark and ammonia.

Again, take the eye. Delirium ferox with an injected eye is the expression of inflammation of the brain where the patient has not typhus fever. But take a case of fever, and is the injected eye a sign of cerebritis? Certainly not. It is merely to be looked upon in the same way as the tongue—it is a local affection under the dominion of the general disease. The truth is, that disease of a true inflammatory character is the rarest thing possible in fever; it is so rare, that some do not believe that it ever occurs. Apply this axiom, then, to treatment, and see what becomes of that doctrine which advocates bleeding in fever, which advocates starvation and purging in fever, which forbids the use of wine, and other stimulants. There is another very important view or argument to be referred to here, which all practical men will understand. If fever was a group of inflammations, or if it was symptomatic of any one inflammation; in other words, if it was an inflammatory disease, we ought to expect that in the larger number of patients who had gone through the process of fever, chronic diseases of organs would be developed. If a patient has acute rheumatism we find, that his heart may become engaged. He recovers from the rheumatism, and then he has a progressive organic disease of his heart. When you reflect upon the extent of fever, the great number of persons that have been at some time in their lives attacked with fever, you should at once come to the conclusion, that if those fevers were examples of groups of local inflammations, we should have a much greater quantity of organic local diseases consequent upon them: but what is the fact? The fact is, that such accidents are extremely rare. How few cases can be adduced of confirmed mania as a consequence of fever! How few cases can be adduced of paralysis, of apoplexy, or of hydrocephalus as a consequence of fever! Surely if, in this enormous number of cases of fever with violent head symptoms, there had been inflammation of the brain, in some of them, at all events, we should have, as a consequence progressive disorganization of the part. Again, take the thorax. How few instances are there on record of chronic progressive pneumonia after fever; how few of chronic pleuritis; how few cases of atrophy of the lung; how few cases of anatomical changes which end in progressive organic disease, which has started from an inflammatory disease that took its origin pending a fever! Go to the heart. We have two classes of heart affections in fever: one, a softening and weakening of the heart; and the other, an excitement of the heart. I don't care which of them you take. Do we find that, after a recovery from fever, in persons who have had either of those affections of the heart during the fever, there is a liability to valvular disease,—that there is a liability to hypertrophy of the heart,—that there is an adhesion of the pericardium? Nothing of the kind results. The fact is, that those organs have never been in a state of inflammation. They have suffered pending the fever, and, the fever having left them, the parts are restored to their normal condition. This is a very important consideration, and you may extend it still further. If fever was an inflammation of the blood-vessels, is it not to be supposed that we should have many cases of disease of the aorta in the thousands of persons who have gone through fever? Yet we find no such results. If you go to the digestive system, (and this is, perhaps, the system, of all others, which is the most liable to organic change,—at least in the Continental fevers,) —take the peritoneum. How few cases do we find—or have we any case to shew—of chronic peritonitis, as the result of typhus fever?—Not one that I know or ever read of; and yet the patient may have had symptoms of severe irritation of the abdomen pending his fever. In fact, all that we know of disease of the peritoneum, in connexion with fever, is simply, that, in certain cases of ulceration of the intestine, a solution of continuity of the peritoneum takes place, and the fæcal matter is effused into the cavity, and the patient dies of acute peritonitis. But that does not touch my argument. Where are the cases of chronic diseases of the liver springing out of typhus fever? It has been long a portion of medical doctrine,—it has become a traditional doctrine,—and everything that is traditional in medicine is to be respected,—that fever has a depuratory effect on the system. Now whether it has a depuratory effect or not, we shall not here inquire; but the very fact of the existence of that doctrine, which is much older than pathological anatomy, implies, at all events, a very general belief that fever does not damage organs; for, if it did damage the various organs that exhibit local symptoms in the course of the affection, we should not have the doctrine established of its having a depuratory effect. The cases of the establishment of a chronic ulcerative condition of the intestinal tube might be adduced in opposition to these views, but I do not place much weight upon them. We may divide them into two classes; in the one, diarrhœa, or some other symptom is established during the fever, which latter runs on indefinitely—here the typhoid disease of the mucous glands has been attended with re-active irritation, and this has interfered with the action of the law of periodicity—so that the fever runs on indefinitely. In the next case, the fever may be supposed to have ceased, but so much disorganization has occurred, that the ulcerative process seems to go on as it might be supposed to do in another case where no typhus had preceded it. The cases related by Dr. Cheyne, in the first and second volumes of the "Dublin Hospital Reports," appear to be examples of these forms of disease.

III. *Lectures on Hernia. Delivered at the Faculty of Medicine of Paris.** By PROFESSOR MALGAIGNE.

LECTURE SECOND.

We have ascertained the frequency of hernia in general, the proportion of the population affected with it, its relative frequency at different ages, in the two sexes and in different countries and races; let us now pass to the consideration of particular species of hernia.

You are aware that there are four kinds of abdominal hernia: inguinal, crural, umbilical hernia, hernia through the linea alba and other varieties of ventral hernia, together with some rare forms of hernia, through the diaphragm or elsewhere, which are called abnormal.

Inguinal Hernia.—Of 335 cases of hernia in males, which I examined in October and November, 1835, at the Beureau Central, 316 were examples of inguinal hernia, which gives the proportion 16 in 17. At the Bicêtre, of 881 cases of hernia, 815, or 13 in 14 were of the inguinal variety. At the *Invalides*, M. Hutin found the proportion the same: 896 hernias, 845 inguinal hernias, or 16 in 17. We were well aware that inguinal hernia was common, but who would have ventured to assert that of 17 cases of hernia, 16 are of this form.

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* Since 1840, when he delivered a course of lectures on hernia, which acquired a great and legitimate celebrity. M. Malgaigne has neither published nor taught anything on this important subject. In February last, after an interval of fourteen years, the learned professor of operative medicine commenced the present series of lectures, which are sought after in Paris with such avidity that three journals—the *Gazette des Hôpitaux, l'Union Medicale, and Moniteur des Hôpitaux*, are publishing them unabridged.

We feel sure of enjoying the gratitude of our readers for placing these lectures before them as rapidly as our space will permit. The first of the series will be found in the April number of the Journal; it was translated as drawn up by Dr. Fano, Prosector to the Faculty of Paris. The present lecture, and the rest of the series, will be taken from the more accurate stenographic report of the *Moniteur des Hôpitaux*. The translations are from the practiced pen of Doctor Otis.—[*Note by the Editor.*]

Causes of Inguinal Hernia.—According to Morgagni, an elongation of the mesentery is the predisposing cause of inguinal hernia. This is a mere hypothesis, and withal a false hypothesis. Hernia often exists and even for a long time, without any elongation of the mesentery; this morbid change is a consequence rather than a cause of protrusions in the inguinal canal.

Scarpa has a singular theory, according to which hernia results from the reciprocal pressure of the viscera and abdominal parieties. Cloquet has shown very conclusively that the parieties alone exert pressure, and that the viscera, by reason of their elasticity, tend to escape somewhere when unduly compressed.

Sir Astley Cooper divides hernia into two classes. One class is caused by the exaggerated action of the muscles of the abdomen; the other depends upon the feebleness and relaxation of the abdominal parieties. The latter occur during convalescence, in old age, in subjects worn down by misery and distress; the former supervene during violent efforts, in riding and jumping, in forced marches, in lifting weights, in defecation, and, in a word, in any circumstances in which the abdominal muscles are thrown into violent contraction. This division is just and striking, a masterly generalization, in fact, without which we should understand little of the nature of hernia. Still, it gives but a vague idea of the causes of hernia. To arrive at a satisfactory solution of this problem, we must return to the relative frequency of hernia at different ages.

Of 300 cases of inguinal hernia, 22 occurred before the conclusion of the first year of life, 17 from 1 to 5 years, 9 from 5 to 10 years. We find, then, that hernia is very common in early infancy, and that it becomes rarer as we leave that epoch. I call these cases *infantile hernia;* others have named them *congenital hernia,* but I shall hereafter demonstrate that true congenital hernia is exceedingly rare. For a time, I even denied its existence.

We come now to a second period; from 10 to 20 years, we find 26 cases of hernia; from 20 to 30, 45, and from 30 to 40, 66. After 10 years, then hernia becomes more frequent, and its frequency increases to the age of 35 or 40. I call these cases *hernias of strength;* they are caused by strong muscular efforts.

From this epoch, hernia is less common. Of the 300 cases we have analyzed, there occurred: from 40 to 50, 42 cases; from 50 to 60, 36; from 60 to 70, 30; from 70 to 90, 11. These are *hernias from feebleness*; their number diminishes absolutely, it is true, but relatively to the great decrease of the population at this age, it augments.

There are thus three distinct epochs in which hernia is produced. The first comprises the hernias of infancy, which, I repeat have been incorrectly termed congenital. Congenital hernia is so rare, that I denied its existence for many years. Professor Moreau has never seen a case of it; Chaussier cites two examples of it, but on the authority of others. Whenever you meet with these so-called congenital hernias, interrogate the mid-wife or those who were around the child at its birth, and you will find that the hernia was not discovered until several hours, perhaps not until several days, after the birth of the child. During intra-uterine life, the child is subjected to equable pressure, and there is nothing to produce hernia, while, after birth, the chill external air or other causes induce the child to cry, the abdominal muscles are contracted, and, as the tunica vaginalis still communicates with the peritoneum, an inguinal protrusion is readily produced.

During youth and mature life, men engage in vigorous exercises or in laborious industry, and *hernias of strength* are produced.

After about the thirty-fifth year, the forces of the economy decline; the muscles and all the tissues lose their power of resistance. I say *all* the tissues intentionally, because it has been asserted that it is the relaxation of the muscles alone which favors the production of these luxations in old men. No, gentlemen, it is not the diminution of muscular force alone, but the relaxation of the ligaments and other tissues, which permits these hernial protrusions. In the aged, the rings, muscles, and all the tissues are relaxed, and in them an hernia is produced by an exertion which would not have been followed in a child or adult by the slightest accident.

Surgeons have accused certain professions of producing a predisposition to hernia. I have examined 247 persons affected with inguinal hernia, with reference to this point. They were engaged in 85 different occupations, which I divided into two categories: professions requiring a standing posture, and professions requiring a sitting posture. The former included 187 hernias, the latter 60.

Military surgeons have remarked that hernia was more common in the cavalry than in the infantry; but it results from the statistics of M. Hutin, according to which, of 893 hernias, 175 occurred in the cavalry, artillery or engineer department, and 718 in the infantry, that this supposition is erroneous, for the ratio here is less than one-fifth. The cause of the frequency of hernia in mounted troops is not the exercise of riding, but the stature of the men composing that corps. In the French service, recruits are received in the infantry who are under 4 feet 10 inches, even; whereas, in the cavalry at least 5 feet are required.

An old military surgeon, M. Roux, informed me that he had been struck by the frequency of hernia in tall individuals. I examined 78 cases of hernia with reference to the influence of stature. Fifteen of these subjects were under 5 feet in height; 21 were from 5 feet to 5 feet and 2 inches; and 42 were still taller. Assuming 5 feet and 2 inches as the medium height in France, our statistics give us 36 cases below, and 42 above the average height, in a total of 78 individuals affected with hernia. Persons of large stature are therefore liable to hernia. The truth is that tall men are usually weak; military surgeons tell us that the infantry soldiers of 4 feet and 10 inches support fatigue much better than the heavy cavalry. I may add an illustration derived from my own observation: Sixty French surgeons, of whom I was one, attended the army which made the campaign in Poland; 13 of them died, and each of these victims was a man of fine stature, who, nevertheless, was unable to support the fatigue which we smaller men readily endured.

In studying the subject of hernia, I have been struck by an anatomical fact which is unnoticed by anatomists, which artists disregard, and which, nevertheless, is of great importance. I refer to a peculiarity in the form of the abdomen, which amounts to a predisposing cause of hernia. There are three principal varieties in the form of the abdomen: the prominent, the flat abdomen, and the abdomen with a triple protuberance. This last variety, which I alone have described, is characterized by a central prominence formed by the *recti abdominis*, on either side of which prominence is a depression formed by the aponeuroses of the oblique and transverse muscles of the abdomen, and again a prominence on the right side and on the left, formed by the bellies of these muscles. I do not know to what anatomical arrangement this form of the abdomen is to be referred; perhaps it is due to the great power of these muscles. However this may be, it is observable that in individuals who present this conformation, there is a prominence at the level of the inguinal ring. This prominence probably depends on a relaxation of the muscular fibre, and predisposes to hernia.

Having examined into the predisposing causes of inguinal hernia, let us sum up the conclusions at which we have arrived.

1. The ratio of inguinal hernias in man is to all other varieties of hernia as 16 to 1.
2. The periods of life at which these hernias occur are divisible into three categories: From birth to 10 years, *hernia of infancy;* from 10 to 35 years, *hernias of strength;* from 35 to 100 years, *hernias of weakness.*
3. The professions requiring an erect posture and muscular exertion, furnish up to the age of 30, three times, and after that epoch four times as many hernias as the sedentary professions.
4. Large stature is also a predisposing cause of inguinal hernia.
5. Of the three different forms presented by the abdomen, that which I have described as the abdomen with triple prominence, appears to predispose to hernia.

What is the value of these conclusions? Are they mere theoretical laws? I am fond of practical deductions, but I do not disdain well established facts, or always cry, *cui bono?*

What is the cause of the immense number of hernias in infants? Here the predisposing cause is evidently an anatomical derangement. The testicle, which occupies the lumbar region during a portion of intra-uterine life, often fails to reach the scrotum until after birth. A passage is thus left open for the escape of the abdominal viscera. If the frequency of hernia in children is attributed to the tardy descent of the testicle, it becomes interesting to ascertain the number of children in whom this condition is present. Wrisberg has examined 102 fœtus at term with a view to the solution of this question. In 72 of these, both testicles had descended; in 11 only the right, and in 7 the left testicle only had descended; in 12 the scrotum was entirely empty. Thus 30 in 102 children were predisposed to hernia.

It is not enough to note the position of the testicle alone, but we must observe also the condition of the canal by which, in intra-uterine life, the tunica vaginalis communicates with the peritoneum. Camper has done this, and found, in 70 new-born children, 63 in whom both testicles had descended. Of these, there were 7 in whom both canals were obliterated; 34 in whom neither canal was closed, 14 in whom this communication remained on the right side, and 8 in whom it continued on the left side.

Whence it results that of 63 children, 56 were liable to hernia; whence it results, also, that the liability of hernia on the right in preference to the left side, is as 7 to 4.

This conclusion leads us to the examination of another question—the relative frequency of hernia on the two sides of the body.

I recollect that my father, who was an old surgeon practicing in a remote district in the country, was accustomed to keep a supply of trusses in order to furnish his patients. He was in the habit of buying twelve trusses for the right side, and one for the left side, and yet when he died, he left a number of trusses for the left side, which he had not had occasion to use.

Of 273 cases of single hernia, which I examined at the *Bureau Central*, there were 171 in which the protrusion was on the right side, 102 in which the left side was the seat of difficulty. The ratio is 7 to 4, which is identical with the ratio of predisposition to hernia on the right side, in new-born children.

At the Bicêtre, there are 437 cases of single inguinal hernia, of which 253 are on the right, and 186 on the left side.

M. Hutin has found at the *Invalides*, 296 right, and 216 left inguinal hernias.

These four series give results almost similar, and permit us to conclude that inguinal hernia is more common on the right side, in the ratio of 7 to 4 or 5.

The concordance of these results is remarkable, and suggests an interesting enquiry into the causes of the right side being more subject than the left to hernia. This, however, is a difficult question. We know that many surgical lesions, fractures and luxations, for example, affect the right side most frequently; it is certain, too, that the right abdominal muscles usually contract more powerfully than those of the opposite side; but these are hardly sufficient explanations. Schenck supposed that the presence of the liver was a cause of the frequency of right inguinal hernia. Martin found an explanation in the inclination of the mesentery to the right side. M. Jules Cloquet has offered a more rational solution of this problem. He suggests that this predominance of hernia on the right side depends on the predominance of muscular efforts of the right side of the body, on the great number of what are commonly termed "right handed" persons. When a man is erect, says M. Cloquet, and makes a strong muscular effort, he holds his breath, and the diaphragm forces the viscera downwards against the resisting abdominal parieties. The chief pressure is exerted in the hypogastric region. If the pressure is directly forwards, no hernia results, but if it is obliquely downwards and forwards, double hernia may be the result. If the body, and consequently the diaphragm, is inclined to the right or left, hernia may take place either on the right or left side.

When we consult statistics, however, we find some serious objections to this seductive theory. When a man is accustomed to carry burthens on his right shoulder, he leans to the left, and this inclination of the body should produce an hernia on the right side, and *vice versa*. Now, the truth is, that persons who carry burthens on the right shoulder are often affected with *left* inguinal hernia, and *vice versa*. From such an examination, one is led to the conclusion that hernia occurs most frequently on the side on which the abdominal muscles act the most powerfully. If M. Cloquet's theory was quite true, there should be some equality between the proportion of right and left hernias, and the proportion of right-handed and left-handed individuals. Of 185 persons affected with hernia, whom I have questioned, 160 were right-handed and 15 were left-handed, or 11 to 1. But the predominance of hernia of the right side over that of the left side is only as 7 to 4. Of these 15 left-handed persons, 10 had hernia on the left side, and 5 on the right side; of 136 of the right-handed individuals, 91 had right hernia, and in 45 the left side was affected. Thus, in one-third of the cases, hernia existed on the opposite side of the body to that which was predominant.

M. Cloquet has examined into the relative weight and position of the testicles, with a view of determining the influence which these organs may have in the production of hernia. He finds that the average weight of the right testicle, is one ounce and two drachms, and of the left testicle, one ounce, one drachm and thirty-six grains, an insignificant difference. Of 30 individuals in whom the left testicle descended below the right, 17 had right hernia, 13 had left hernia. Of 16 in whom the right testicle was the lowest, 10 had right, and 6 had left hernia. Neither the difference in weight of the testicles, therefore, nor their respective position in the scrotum, explains the predominance of hernia of the right side.

(*To be Continued.*)

CHRONICLE OF MEDICAL SCIENCE.

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *On Constipation.* By Professor TROUSSEAU.

Constipation should be defined, a difficulty in the execution of the fœcal matters, independent of any organic lesion. We should not rank among the constipated those in whom defecation is impeded by a tumour or hernia, or invagination, or other mechanical obstacle. Simple constipation is nothing more than absence of alvine evacuations.

Such a condition may depend on many causes. First, there is a sort of physiological constipation, connected with the constitution of the patient; an individual eats but little, and is endowed with great powers of assimilation. The quantity of excrementitious matters, in such a case, are insufficient to stimulate the intestine. These matters are accordingly retained until they accumulate, and their retention produces uneasiness. There are others, however, who eat largely and assimilate no better than their neighbors, whose intestines are consequently filled with fœcal matters, and still there is no regularity in the dejections. Such individuals suffer from continual malaise; they are in a state of constant discomfort; the want of proper alvine evacuations causes them real suffering.

Defecation, the last stage of digestion, is one of the most complex functions of the economy, and is deranged by a multitude of circumstances. The causes of constipation are numerous, therefore, but the most important are intestinal inertia, and the faulty secretion of certain glands. Different secretions predominate in different individuals. One perspires freely, and urinates but little, and secretes but little saliva. The habit of another is the reverse of this; the secerning functions are complementary, as it were, to one another. It is probable that the liver and pancreas also obey this law, and that they are affected by the excessive action of other glands. However hypothetical this proposition may appear, it is as admissible as many others which are received in medicine. It is as rational to suspect the liver and pancreas, when there is a want of lubrifaction of the bowels, as to suspect the kidneys when there is some derangement of the urine.

Among the causes of constipation, we must examine particularly into the influence of diet, of habit, of senile debility, of diseases foreign to the intestines, and of the abuse of purgatives.

As we have already observed, some individuals eat so little, that the unassimilable matters are insufficient to furnish regular dejections.

There are some kinds of food which cause the same result; which are digested with such facility that the fœcal residue amounts to nothing. Rice, for example, disappears almost entirely in digestion, and it is this property which renders it such an appropriate article of nutriment in cases of diarrhœa. Vegetable diet is the least nutritious, and produces the most copious stools. To be convinced of this fact, it is only necessary to compare the dejections of herbivorous and carnivorous animals.

To a certain point, it may be said, that we evacuate the bowels when we wish to do so, only the will must be exercised. If we surmount the inclination to perform this function, it subsides, and may not return for many days. In this way a kind of constipation is produced, which is not the least obstinate or the easiest to cure. It is in this way that so many women who are prevented from obeying the calls of nature by foolish scruples, and men of letters who are absent-minded or preoccupied, become obstinately constipated.

Purgatives, pills, and powders, irritant enemata and even injections of cold water, and evacuants of all sorts, even when they do not induce a plegmasia of the intestinal canal, deprive it of its normal irritability; it becomes insensible to the simple stimulation which once sufficed to produce the evacuation of the fœcal matters. As tobacco, after provoking an abundant secretion of mucus or saliva by a surexcitation of the glands of the nose and mouth, enfeebles in reality the natural secretion, which diminishes notably when the stimulus is withdrawn, so habitual enemata prevent the intestine from acting by itself, by lowering its normal excitability. This cause of constipation is very frequent in fashionable women, who early acquire the habit of relieving the bowels by an enema in order to feel unembarrassed during the day. They soon lose the habit of evacuating the bowels naturally, and are forced to have recourse to other remedies of still greater energy.

Child-birth, certain uterine displacements, fissures of the anus, and hemorrhoids, render defecation very painful. Patients in these conditions put off the moment of evacuating the bowels, and induce a secondary constipation, which does not always cease when the cause which produced it is removed.

After several labours, sometimes after one only, the anterior abdominal wall becomes so flaccid and relaxed that it no longer contracts; the intestines are thus deprived of a powerful auxiliary and lose their tonicity.

Age, which impairs all the faculties and all the organic functions, does not spare the intestinal apparatus. Defecation is ill performed in the aged, like digestion and micturition, and retention of the fœces supervenes, without organic disease of the rectum, as retention of urine takes place without organic alteration of the bladder. The intestine undergoes a sort of senile paralysis. It no longer contracts on the excrementitial bolus; it is powerless to expel it; enormous agglomerations of fœces are formed, and dilatations are made above the sphincter ani, which sometimes give rise to grave complications in the operation of lithotomy.

Constipation is a serious disease, and deserves great attention; for even supposing that it is not dangerous in itself, it always complicates the slightest ailment, and frequently lays the foundation of an hypochondria which involves life in numberless disorders.

The treatment should above all be directed to the removal of causes. It must not be thought that constipation is cured when an evacuation is procured; this would be as false as to imagine that a person is cured of wakefulness when he obtains sleep by opiates. We should seek not only to obtain relief for the moment, but regularity in the future. Constipation is not to be cured by Seidlitz powders or other purgatives, which, in the end, only increase it.

In the first place it is necessary to regulate the function; we should do everything to subject it to the empire of the will. We know how great is the power of habit over organic functions. When once accustomed to operate in a certain way, at certain hours, they have a strong tendency to continue to act thus. The habit of going to the privy is like the habit of urinating at certain periods, the habit of shaving, and of washing the face; when once these habits are established, they cannot be dispensed with. A constipated person should visit the water-closet at a convenient hour, he should remain for sometime, concentrating all his attention, all his will, all his contractile powers, on the act in question; he should make reiterated and energetic efforts to accomplish it. Whatever the result, he should return at the same hour on the morrow, and if, in the interval, a desire to go to stool is felt, it should be resisted, and the closet should be visited only at the hour chosen.

The diet should be altered. Instead of the abstemious diet often adopted by patients, they should be ordered abundant and nutritious food, of a kind which will at the same time promote digestion and leave a voluminous residue which will force the intestine to disembarrass itself. This disease, we have said, causes numerous disorders. Constipated persons always have oppression of the stomach and headache, for which they are ordered a light diet, white meats in small quantity, little wine, etc. This is an error. They should be desired to eat largely of roast meats. They should be compelled to eat, and reminded that, according to the English expression, one leg of mutton follows another.

But sometimes it is necessary to assist the will by an adjuvant, to facilitate an act, the habit of which is lost, as it were. We must beware of purgatives, but yet some medicine is necessary to assist defecation. Belladonna is this remedy *par excellence.* It does not purge; it only facilitates alvine evacuation. To what does it owe this property? It is difficult to say. Perhaps, as opium excites the cutaneous secretion and digitalis that of the urine, so belladonna may influence the liver, pancreas, or other glands opening on the intestinal tract. What is certain, however, is that the fifth of a grain of belladonna almost almost always procures several alvine evacuations. The dose may be increased to one grain, but as soon as the habit of defecation is restored, the dose of belladonna must be diminished and gradually abandoned.

Suppositories are much used, and commonly succeed well. Country people employ the middle stalk of the cabbage; physicians make them of hardened honey or cocoa.

Lastly, if constipation is connected with flaccidity of the abdominal walls, we must have recourse to a tight abdominal bandage, which will confine the intestines normally, and enable them to contract.—*Gazette des Hôpitaux.* O.

2. *On Some of the Remedies for Stomach Disorders.* By George Budd, Professor of Medicine, King's College, London.

Ipecacuanha increases the secretions of the stomach in greater degree, probably, than any other medicine we possess. It increases, as is well known, the secretion of the skin, and the secretion of the mucous membrane of the air-tubes; but it increases in much greater degree, the secretion of the mucous membrane of the stomach, to which it is directly applied. An emetic dose of ipecacuanha causes a copious secretion of mucus and of gastric acid, which is rejected by vomiting. Doses too small to excite vomiting or nausea increase the secretion of the gastric juice, and in so doing render digestion quicker and stronger. Its right application, therefore, is where digestion is slow, or where, through slow and feeble digestion, nettlerash or other secondary disorders are bred.

Small doses of ipecacuanha were, I believe, first recommended as a remedy in indigestion in a tract published in 1785, by a French naturalist, M. Daubenton, well known from the aid he afforded Buffon in the production of his splendid work on natural history. Daubenton was educated for Medicine, but left the practice of it for his favourite study of natural history. In the tract in which he recommends small doses of ipecacuanha in indigestion, he says, "I have repeatedly experienced beneficial effects from it in my own person that surpassed my expectations, and I have prescribed it to many others, with whom it has had similar success. I consider it, therefore, a duty to publish the observations on the utility of this simple remedy, for the benefit of those persons who have delicate stomachs, and as particularly useful in that form of indigestion which is so frequently found to attend the turn of life."

Daubenton is careful in stating that the cases in which ipecacuanha is useful are where digestion is slow,—where the food lies heavy on the stomach, and there is an inability for mental or bodily exertion for some time after meals,—a kind of disorder which is, he states, especially common in men of middle age, or beyond it, who lead sedentary lives.

He believed that ipecacuanha owes its efficacy in such cases to its exciting peristaltic action in the stomach, and imparting an energy to its glands.

He recommends that it should be given in the morning fasting, and in quantity sufficient to occasion a slight feeling of vermiculating motion in the stomach, but without causing sensation of pain or nausea. The quantity requisite to produce this effect varies, he says, in different persons from a quarter of a grain to two grains. He advises, therefore, that very small doses be given at first, which may be gradually increased till a sensible effect is produced.

In the beginning of this century an English translation of Daubenton's tract was published by Dr. H. P. Buchan, and rapidly sold.

In the preface to this translation, Dr. Buchan says: "The translator of this little tract can truly declare, that since he became acquainted with the information contained in it, his practice in the complaints here enumerated has been more successful and satisfactory than it was previously, and his sole motive for publishing the translation, which was originally made for his own private use, is to extend the knowledge of what he conceives to be a practical improvement in the art of Medicine."

The medicine in this application being thus introduced to the profession in this country, was much employed for a time, and then fell into disuse, in consequence, I believe, of its having been employed indiscriminately in various kinds of indigestion, and often, therefore, in kinds to which it is not suited, and which it would tend to aggravate rather than remedy.

It is clearly impossible that any medicine having a definite mode of action—whether it be to increase secretion or to restrain it—can be used successfully in stomach disorders, unless the various kinds of stomach disorder be distinguished, and the medicine be given only in that kind, or in those kinds, to which it is suited.

Here, as in other departments of medicine, we must rightly distinguish kindred disorders before we can learn the right use and the power of remedies.

I have used ipecacuanha as a remedy for indigestion for several years, and believe that there is no other medicine we know of so effectual in removing the uneasiness and sense of oppression after meals, and the various other evils that result from slow digestion.

Small doses of rhubarb, ginger, and pepper, have a similar kind of action, and may be given singly or together for the same purpose. I generally prescribe ipecacuanha, from half a grain to a grain, in a pill, with three or four grains of rhubarb. With many a favourite remedy for the discomfort resulting from slow digestion is a grain of cayenne pepper, with three or four grains of rhubarb. The best time for giving medicines for the purpose in question is just before dinner, and before any other meal after which a sense of oppression is usually felt.

Bismuth was, I believe, first employed as a remedy for stomach disorders towards the close of last century, by Dr. Odier, Professor of Physic, in Geneva, who made known its virtues in a paper published in the *Journal de Médecine*, in 1786, and entitled, "Sur les Effets du Magistère de Bismuth, donné antérieurement comme antispasmodique." In this paper Odier says, "Most of the patients who were cured by it were affected with cramp or violent pain in the stomach after meals. It is especially in such cases that I have found bismuth superior to all other remedies." And he adds, "It has also much success in stopping palpitations, pains in the stomach, and other nervous ailments in pregnant women." "It fails where the cramps in the stomach and other nervous ailments depend on some organic disease rather than on simple excess of irritability."

In 1801, a paper on the effects of bismuth was read to the Medical Society of London, by Dr. Marcet, at that time one of the Physicians of Guy's Hospital, who tells us that he learned the use of the medicine the year before at Geneva, from Dr. Odier.

Dr. Odier, in a note to Dr. Marcet, says: "I use this remedy with success in doses of six grains, four times a-day, in all cases of spasms of the stomach, brought on by any kind of aliment, and proceeding only from the irritability of that organ. This complaint is extremely frequent at Geneva, particularly among servant-maids, who are in the habit of carrying water on their heads, and make great use of their arms."

Dr. Odier assured Dr. Marcet, that he had tried the medicine in much larger doses, and that he had never observed it to produce any bad effects whatever; while, on the contrary, he had hardly ever known it to fail when used in the circumstances that have just been mentioned.

Dr. Marcet made trial of the medicine in London, and his experience confirmed the previous observation of Dr. Odier, that bismuth is a remarkably successful medicine in what were then vaguely termed spasmodic affections of the stomach.

Since that time it has been extensively used, often with very indefinite notions as to what it is capable of effecting, and, of course, with very various results. Amid the conflicting testimony respecting it, there is, however, ample evidence that it has real and great efficacy in some forms of gastric and intestinal disorder.

It is often of signal service, as Odier remarked, in the functional disorders of the stomach that are so common in women who are ill fed and overworked or exhausted in any other way, and especially where the stomach is very irritable, so that pain and vomiting occur soon after meals.

It is an efficient remedy when pain in the stomach, with increased secretion of gastric acid, occur from tuberculous disease of the lung, or from some irritation elsewhere; and in infants, where this kind of disorder, with exhausting diarrhœa, results from the irritation of teething, or from improper food, or from the change of diet on weaning.

Against the pain in the stomach and vomiting, that result from simple ulcer and other forms of organic disease, it is only of use occasionally when the stomach secretes an unhealthy mucus, or when there is an excessive or untimely secretion of gastric acid.

It is of little use in the indigestion that depends on gout, and that occurs in well-fed and plethoric men.

It is of no use in the uneasiness of the stomach, of which I have before spoken, that results from slowness of digestion or a scanty secretion of gastric juice.

Bismuth, as applied to the stomach, was considered by Odier an *antispasmodic.* The action it exerts seems to be confined to the mucous membrane with which it is brought into contact, and to be a *surface* action. It restrains undue secretion, and has a sedative influence on the stomach, probably by its direct action on the coats of the stomach, as well as by preventing the outpouring of irritating secretions.

It is best given, suspended in water, a short time before meals. Ten grains, three times a day, is, in most cases, an efficient dose; but it may be given, as Odier discovered, in much larger quantity, without any ill effects. It is soothing, rather than irritating, to the mucous membrane over which it passes; and from being of such sparing solubility, has little effect elsewhere, except what it has indirectly from the action it exerts on the stomach. It has, indeed, of late, been recommended by more than one writer to be given by drachms rather than grains.

Bismuth may often be given with advantage with other medicines,—with opium, or magnesia, or chalk,—which allay pain, or neutralise an excess of acid, or restrain undue secretion.

Hydrocyanic Acid is another remedy of great use in the treatment of disorders of the stomach.

The bitter almond and the cherry laurel, which owe their efficacy to the hydrocyanic acid they contain, have been long used in medicine. Hydrocyanic acid, which was first separated by Scheele, in 1782, seems to have been first employed in its separate state in Italy, about 1810, by Drs. Borda and Brera. It was little used elsewhere till 1817, when it was recommended by Majendie, (in a paper presented to the Académie des Sciences, Nov. 17, 1817,) as a remedy in diseases of the chest, especially consumption.

In this paper, Majendie arrives at the conclusion, fully justified by subsequent experience, that dilute hydrocyanic acid may be employed with advantage to restrain nervous and chronic coughs; and that it is useful in the palliative treatment of phthisis, in diminishing the hardness and frequency of the cough, in moderating the expectoration, and in favouring sleep.

It was first recommended as a remedy for stomach disorders in 1820, by Dr. Elliotson, in a paper entitled "Numerous Cases Illustrative of the Efficacy of the Hydrocyanic or Prussic Acid, in Affections of the Stomach; with a Report upon its Powers in Pectoral and other Diseases in which it has been already recommended."

In this paper, Dr. Elliotson gave brief notes of a series of cases in which pain in the stomach or vomiting was speedily removed by this medicine. It was soon tried by others with the same effect, and is now one of the medicines most in repute for the relief of pain in the stomach and vomiting.

It is not, however, in all cases of gastralgia, or in all cases of vomiting, that hydrocyanic acid can be given with advantage. In some cases, it aggravates pain in the stomach, or increases vomiting, or even brings it on when it did not previously exist.

It is of most service in the gastralgia, and in the sympathetic vomiting, that occur in nervous persons from irritation elsewhere, without inflammation or ulceration of the coats of the stomach and without undue secretion of gastric acid.

Given alone, or in conjunction with soda, it is the most effectual remedy we know of for the gastralgia that is apt to occur when the stomach is empty of food in nervous persons who have been subjected to exhausting influences; and for the vomiting that results from granular disease of the kidney.

It is of no use when pain or vomiting result from an inflammatory condition of the stomach.

It aggravates pain and vomiting when these symptoms are caused by an ulcer, or when they depend on excessive or untimely secretion of gastric acid. It often, for example, increases the vomiting that occurs in phthisis, which alkalies and the vegetable astringents will prevent.

When there is undue acidity of the stomach it may, however, often be given with advantage in conjunction with soda or potash, when it would not be of service if given alone. The alkalies neutralise the excess of acid, and the sedative influence of the hydrocyanic acid is then exerted.—*Medical Times & Gazette.*

3. *On the Treatment of Sciatica.*

Blisters with morphia are valuable remedial agents, but they are both expensive and inconvenient. On this account, Professor Trousseau has resorted to his *méthode hypodermique*, which consists in introducing narcotic substances beneath the skin in order to allay neuralgic pains. The operative procedure is very simple. In the case of sciatica, the patient is placed on his belly, and a small crucial incision is made through the skin over the sciatic notch. A pea is placed in this incision, and an issue is thus formed. To the efficacy of an issue is superadded the influence of an anti-neuralgic remedy exerted in the immediate vicinity of the nerve. The peas employed by M. Trousseau are prepared by taking thirty-six grains each of extract of opium and extract of belladonna, and a sufficient quantity of powdered guiacum and mucilage to form a mass, which is to be divided into twenty pills. These pills acquire the hardness of wood, after the lapse of twenty-four hours.

The pea which is introduced on the first day swells rapidly and enlarges the cavity made by the incisions. The medicated bolus is now to be substituted. It is put at the bottom of the issue, with two ordinary peas, on either side of it, the whole is covered by a bit of charpie, and maintained in place by a strip of diachylon.

On the third day, unless the patient is too much narcotized, two medicated peas are inserted; on the fourth day three, if it is necessary. In eight days, an amelioration bordering on entire recovery is usually experienced. But, as sciatica is obstinate and prone to relapse, M. Trousseau advises that suppuration should be kept up for three weeks. In this way, a permanent revulsive is employed, while an avenue is reserved for the introduction of narcotics, if they become necessary.

If we reflect that the salts of morphia cost ten cents the grain, and that the peas we have described cost only one cent, and that ten or twenty of these peas usually suffice to remove the pain of sciatica; that any one in the world can do the necessary dressing; it will be admitted that this resource is valuable, and the more so because poor workmen are most frequently the victims of sciatica.

[The *Journal de Médecine et de Chirurgie Pratiques*, from which we borrow the foregoing observations, publishes M. Trousseau's method as entirely new. We have been informed, however, by Dr. Wiley and other physicians of Amelia County, Virginia, that it has long been customary in that locality to treat sciatica and painful affections of superficial nerves, by introducing beneath the skin, along the track of the affected nerve, a paste made by moistening sulphate of morphia with creosote. Thirty or forty punctures may be made with an ordinary lancet, the mode of introducing the paste differing little from that employed in inserting vaccine virus. Relief is often obtained by this process in *ten minutes*, and, we are told by Dr. Wiley, that the uniformity in the action of this remedy is equal to its promptitude.]

Dr. Desruisseaux, of Caen, being consulted by a man suffering from obstinate sciatica, cauterized the lobe of the ear with the actual cautery. Dr. Roulland, in reporting this case, employs the following language: "If this successful result does not prove the infallibility of auricular cauterization in sciatica, it should assuredly suffice, when taken in conjunction with the many similar cases which have been recorded with regard to this empirical remedy, which is already passing into oblivion."—*Revue de Thérapeutique*, March 1st.

———An Italian physician, Signor Giovanni Pugno, states that he has employed the mode of treatment described in the last paragraph, since 1830, with uniform success. Before that date it was practiced by Costa and Pugliano.

Sig. Pugno at first cauterized the root of the helix exclusively, but he now makes a linear cauterization on any part of the external ear indiscriminately. The ulcer which results is covered with olive oil and then let alone. This remedy is effectual in odontalgia as well as in sciatica.

Sig. Pugno adduces thirteen cases successfully treated by the method which he advocates.—*Gazette Medica Stadi Sardi.*

———Cauterization of the auricular appendage as an anti-neuralgic remedy is not a new invention. In a work printed in 1740, Professor Huck, of Leyden, notices this plan of treatment, and describes an instrument for facilitating it, which, he says, "being raised to a white heat, shall be applied to the anti-tragus."—*Journal des Connaissances Med. Chir.*

———M. Saunders, (*des maladies nerveuse*, T. ii, p. 365,) declares that he has never known a case of uncomplicated neuralgia which resisted the endermic application of morphia. He recommends that a small surface should be denuded over the most painful portion of the course of the sciatic, by means of ammonia or cantharides, and that a pommade containing a grain, or even two grains, of muriate of morphia should be applied over the vesicated surface.

It is well to push this treatment until some general symptoms of narcosis are manifested, otherwise the neuralgia is liable to return.

M. Sandras condemns the anti-neuralgic treatment by numerous and repeated blisters, vaunted by Cotunni, and revived by Valleix; regarding it as less sure, less prompt, and more painful than the method he adopts. He rejects the internal administration of turpentine, "because it is detestable to swallow, and of more than doubtful efficacy." He says nothing of electricity and acupuncture, because the successes which have been cited in favour of these remedies are less numerous than the failures he has witnessed, and is equally silent in regard to transcurrent and auricular cauterization, because, "having met with invariable success with the endermic morphia treatment, it has never been necessary to have recourse to them. (P. 368.) O.

4. *Observations on Gangrene of the Lung, Treated with Success by the Inhalation of the Vapour of Turpentine.* By Professor Skoda, of Vienna.

Four cases of gangrene of the lung have been treated by Professor Skoda, in the following manner:—The essence of turpentine is poured upon boiling water, and the patient is directed to inhale the vapour for fifteen minutes, every two hours. Sulphate of quinine is administered also in the usual doses. The first case was that of a servant affected with limited gangrene of the superior lobe of the right lung. After six weeks of this treatment, it became impossible to detect either infiltration or gangrene of the organ. On the contrary, the respiratory murmur had returned over the whole region. Three months afterwards the patient was seen in good health.

In the second case, an inn-keeper of mature age and strong constitution, became the subject of a gangrenous cavity in the lower lobe of the right lung, consequent upon disease commencing March 11, 1852. On March 21, the patient commenced the inhalations of the vapour of turpentine: he continued, without repugnance, for five or ten minutes every two hours, taking, at the same time, the usual doses of quinine.

At the end of three weeks, the expectoration, which had been extremely abundant, (a pint and a-half daily,) became reduced to a quarter of a pint. The inspirations had been employed four times a-day. At the end of six weeks, the patient could quit his bed. His strength was returning, the appetite was improved, and his general aspect favourable; but the expectoration continued to be fetid from time to time, and was always sanious. The right side of the chest was painful, and respiration laboured, but the air entered the circumference of the lower lobe; the respiration being uncertain and accompanied by feeble râles and sibilance. The patient went into the country, where he continued the turpentine inspirations twice a-day up to the middle of July, when both cough and expectoration had entirely disappeared.

In the month of December, 1852, he came to M. Skoda for a certificate of health. There was no pain, nor oppression, nor cough. He had recovered his *embonpoint* and his strength; there was no retraction of the thorax; vesicular respiration everywhere.

In the third case it was not in the Professor's power to persist in the plan. The fourth case is still under treatment. A butcher, of strong constitution, had a gangrenous cavity in the inferior lobe of the left lung. He fell ill about the end of May, 1852. The inspirations of turpentine were commenced June 4. At the end of a week, the fetid expectoration, which daily equalled two pints, had entirely disappeared, and the patient considered himself well, because the pain and the oppression in breathing had diminished, the appetite was returned, and the sleep was tranquil. He therefore left off inhaling the turpentine, which was extremely disagreeable to him.

On June 19 there came on a severe shivering fit, with cough and dyspnœa, and during the following night the patient expectorated several pints of extremely fetid sanies of dirty brown colour. The inspirations were recommended, but the patient used them as little as possible, on account of the irritation which they produced in the air-passages. In eight days the quantity of matter brought up had greatly diminished, and the pulse was normal, but there was pain in the chest. The patient lay immovable upon his back, in a state of great weakness and prostration; there was no appetite. The lower lobe of the left lung was impervious to air. The inspirations were again suspended, but again recommenced on account of recurrence of the bad symptoms; the disagreeable odour of the turpentine being partly rectified by a few drops of the essence of rose. About the middle of October he was able to go into the country, having recovered strength sufficient to leave his bed; nevertheless there remained a sense of oppression, and pain and pressure under the left scapula. At the end of January, he considered himself well. There was a sudden expectoration of two ounces of blood, after a slight fit of coughing, on February 10, probably proceeding from the callous walls of a former gangrenous cavity; but there are no signs of further infiltration, and the case seems likely to terminate well.—*Zeitschrift füur k. k. Geselschafft der Aertre zu Wien.*

5. *The Extract of Conium in Delirium Tremens.* By Walter F. Jones, M. D., Petersburg, Va.

Many cases of delirium tremens occurring in old drunkards whose constitutions have been much impaired by long indulgence in drinking, have been successfully treated by the use of the above medicine. That particular symptom so troublesome to both patient and physician, sleeplessness, has been relieved in a short time by the employment of the extract of conium, given in two grain doses, once in every two, three, or four hours. I would only recommend this article to the profession, on trial, believing, as I do, that we are possessed of no medicinal agent which acts so peculiarly and so beneficially in alleviating that morbid condition of the nervous system, which is an accompaniment to this common, but no less terrific, disorder. I have often given it in 3 grain doses, once in 4 or 5 hours, and have found it to act in no other way than in producing a most delightful soporific effect.

MATERIA MEDICA AND PHARMACY.

1. *On the Use of the Argemone Mexicana in Cholera.* By W. HAMILTON, M. B.

In the imperfect state of our present acquaintance with the pathology of spasmodic or Asiatic cholera, it would savour more of the spirit of charlatanism than of the modest diffidence of science to offer to the world any remedy as a specific for that mysterious malady; and even were I disposed to recommend the seeds of the Argemone Mexicana as such, I should at least wait till I had something like evidence to bring forward in support of the recommendation.

Hence, while I feel gratified at the prospect which the public spirited conduct of Mr. Bojers, of the Mauritius, affords of obtaining a fair trial of its merits in this country, I cannot but express my regret at having been so far misunderstood by that gentleman, as to be supposed to have said, what I am without any authority for asserting, that the oil of these seeds has been already and beneficially tried in Jamaica.

If Mr. Bojers will take the trouble to refer to the first notice of the argemone, inserted in the fourth volume of the *Pharmaceutical Journal*, p. 168, he will understand what those properties are which led me to anticipate benefit from the exhibition of the oil in the incipient stages of Asiatic cholera. He will there learn, upon the authority of Dr. Affleck, an old and experienced practitioner of Jamaica, that an emulsion prepared from ʒij. of the seeds of the argemone rubbed up with ℥viij. of water and a little sugar, in half-ounce doses every half-hour, relieved the violent pain and retching of flatulent colic after the third dose, brought on a composed sleep of two hours' duration after the fifth dose, and removed the last symptom of the complaint by a copious alvine evacuation soon after; thus manifesting the rare combination of anodyne, anti-spasmodic, hypnotic, and purgative action, which seems best calculated to meet the early symptoms of Asiatic cholera.

But the oil obtained from the seeds presents their virtues in a more concentrated and exalted degree, thirty drops upon a lump of sugar producing, almost instantaneously, all the curative effects of the five bulky doses of Dr. Affleck's emulsion.

From the dry state in which Mr. Bojer's supply of seeds must have reached this country, it may be difficult perhaps, if not impossible, to obtain from them a sufficiency of oil for experiment, and Dr. Affleck's emulsion may prove the most judicious form of exhibition. Although, even should the effect disappoint expectation, we should not hastily condemn the remedy, or attribute to fanciful exaggeration the reports of experienced practitioners. Oleaginous seeds are subject to deterioration during a protracted voyage, and oil extracted from the recent seeds on the place of their production, sent home in well-closed bottles, would afford a much better criterion to judge from than any that could be obtained from them in this country.

It would be likewise important to determine by repeated experiments in what condition the seeds should be to yield oil in the greatest abundance, and possessing the greatest amount of activity.

A beginning, however, thanks to Mr. Bojers, has been made, although under an erroneous impression; and we can only hope that the subject will not be lost sight of again till a satisfactory solution shall have been obtained upon unquestionable grounds.

2. *Preservation of Health in the Expeditionary Army in Turkey.*

Dr. J. W. Graves, late Physician to the Governor General during the war with Poland, writes in the *Times* as follows:

"As the army destined to co-operate with the Turks will have to encounter more deadly foes than the Russians—viz., fever and dysentery—I may be permitted to offer a few remarks thereupon, which I noted down during a residence of several years in the East, especially among Cossacks, Tartars, and Circassians.

"As prevention is better than cure, and as in all probability quinine, from its high price, will be confined solely to hospital practice, or to the dressing-case of the officers, it may be advisable to let the soldiers know on disembarking at Gallipoli, etc., that in the marshes and on the borders of the numerous lakes there grows a herb which, *cæteribus paribus*, will prove their ægis or sheet anchor, being both a preventive and cure of diseases arising from marsh miasmata. It is the sweet-scented flag (*calamus aromaticus*), of the roots of which every man should have a handful in his knapsack, chewing it daily *ad libitum*, or, what is still better, powdering it and taking a teaspoonful two or three times a day in a little water: if a teaspoonful or two of the wodki or brandy of the country be added to it, the better. It is often substituted for tea and coffee by the Russians, and makes a very agreeable beverage; in fact, having myself used it extensively in practice, I can safely pronounce it one of the most valuable and cheap drugs in the whole *Pharmacopœia*.

"Presuming that this hint will not be lost sight of by the medical department, which, no doubt, has issued its instructions for the preservation of the health and valuable lives of our 'raw recruits' (thereby preventing a repetition of the awful mortality of Walcheren, of which I was an eye-witness), I will conclude by stating that, unless due care be taken to supply the troops with beef from England, or rather from Tunis, Oran, and other places on the coast of Barbary, where it is abundant (the Dobrudscha, whence the Turks have hitherto been supplied with it, being in the possession of the Russians), dysentery with all its horrors will commence its ravages; for no British soldier can escape it if confined to a diet of goat's flesh, sour wine, and fruits, on which he will have to subsist.

"I may add, that among the Don Cossacks an excellent substitute for quinine or Peruvian bark is composed of equal parts of oak-bark, quassia, sweet-scented flag, and black pepper. In Circassia, gentian is used in lieu of quassia, where it grows in great abundance on the hills."

3. *Tully's Camphorated Powder.*

Dr. Tully, formerly professor of materia medica and therapeutics in the medical department of Yale College, some years ago introduced an anodyne diaphoretic powder designed as a substitute for the compound powder of ipecacuanha, which is prepared as follows:

℞. Morphiæ sulphatis, gr. ij.
Pulveris glycyrrhizæ,
Cretæ preparatæ,
Gum. Camphoræ, aa, ℈ij.
Misce.

This compound is almost exclusively employed by the disciples of Dr. Tully, and by many other physicians in Connecticut and Massachusetts, in all cases in which Dover's powder is commonly employed. It is supposed to be more palatable, and less apt to excite vomiting than the remedy for which it is substituted, while its efficacy is the same. The usual dose of this powder is ten grains, containing the sixth of a grain of sulphate of morphia.

4. *Therapeutical Effects of Gold.*

The perchloride of gold and sodium has been used successfully in the treatment of scrofulous and cachectic patients, and various cases reported by Mr. Chatterly to the Western Medical and Surgical Society of London. The continental physicians have also spoken favorably of this method of treatment.

Mr. Chatterly uses the remedy in doses of 1-24th of a grain, mixed with a little powdered orris root, and rubbed on the dorsum of the tongue by means of a piece of wood covered with wash leather. It was applied daily before dinner. Used in the manner above mentioned, this salt was found to act as a stimulant, cholagogue and alterative, entirely free from the depressing effects of mercury, and is considered a valuable medicine in scrofula and cachectic conditions of the body in unhealthy children.

The remedy should be cautiously used, and in small doses, as an inflammatory condition of the stomach is likely to supervene.

SURGICAL PATHOLOGY AND OPERATIONS.

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1. *On the Keloid of Alibert, and the True Keloid.*

Dr. Addison of *Guy's Hospital* read before the *Royal* Medical and Chirurgical Society an interesting paper on this novel subject.

The more immediate object of this communication was to show that the keloid originally described by Alibert was altogether different in its mode of development, character, and progress, from another disease occurring in the same tissue, and to which, with much greater aptitude, the term *keloid* might be applied, if regard be had to the resemblance to the effects created by a burn, which the author thought the correct interpretation of the word, deriving it from κηλις, *quasi ustione facta macula.* The keloid of Alibert, and others, could hardly be regarded otherwise than as a fibrous tumour developed in the subcutaneous areolar tissue; the other form of the disease, although originating in the same tissue, was of a character, and led to consequences widely different. The keloid of Alibert first appeared in the form of very small, hard, shining, tubercular-looking, elevations, round or oval in shape, of a dusky deep-red colour, and attended with itching and pricking sensations in the part. These tumours slowly increased, and comprised an area varying from that of a horse-bean to that of a small almond. The tumour displayed oftentimes a hardness and elasticity which conveyed the notion of so much fibro-cartilage, to which it had not inaptly been compared. After an uncertain period, the outline of the tumour became broader, and more irregular, and by the aid of a magnifying glass, delicate, whitish, tendinous-looking, lines might be perceived stretching across the surface of the tumour, mingled with minute blood-vessels of a bluish or purple colour. The extension of each individual tumour seemed to be affected by certain tapering claw-like processes proceeding from its edges and angles; and thus was produced a puckering of the skin. The development and growth of these tumours might proceed for months, or even years, and at last attain the size of an inch, or even two inches. As the growth of the tumour increased, the sensations of pricking and itching become aggravated to a sense of constriction, or even severe stabbing, extremely distressing to the patient. The morbid product which essentially constituted the keloid of Alibert took place in the subcutaneous areolar tissue between the curtis and adipose membrane. Females, from the age of eighteen to thirty-five, were most frequently the subject of the disease. The situation of these tumours was usually near the sternum, or between or upon the mammæ. It was, however, found sometimes in the male. Alibert considered the disease in some way allied to cancer. Several cases were described, and a number of beautifully-executed models and drawings illustrated the form of the disease.

The author then entered upon the subject of "true keloid;" a form of disease leading to much more serious consequences than that lately described. With the exception of a slight allusion to it by Dr. Coley, it had not been noticed or described. Like the keloid of Alibert, it has its residence in the subcutaneous tissue, and is first indicated by a white patch or opacity of the skin, round or oval in shape, covering a space varying in size from a silver penny to a crown piece, scarcely elevated above the surrounding part, and unattended with any local pain or other inconvenience. A more or less vivid zone of redness surrounds the whole patch, which certifies to the presence of vascularity of the parts beneath. When the patch attains a larger diameter its surface presents a faint yellowish, or brownish tint, communicating a mottled appearance to the spot. With the progress of the disease occurs a hardness and rigidity of the part, accompanied by itching, and a sense of pain and constriction; and, when situated on the extremities, the hardness may be traced along the course of the tendons, when it then interferes with the action of the limb, imparting a sense of constriction, distorting the gait, and rendering the patient a cripple for life. As the disorder proceeds, a change of colour takes place, the diseased surface becoming reddish, yellowish, or of a dead-leaf colour. The cutis manifests a disposition to superficial ulceration, and, when not excoriated, there are often seen tubercular or nodular elevations, the whole strongly resembling the remains of an extensive and imperfectly cicatrised burn. From some part of the boundary of the discoloured skin may now and then be seen reddish claw-like processes extending into the sounder integument, and bearing a very exact resemblance to those mentioned as characteristic of the keloid of Alibert. The pain and uneasiness of the part, the zed zone surrounding the patch, the injection of the neighbouring veins, justifies the inference that the morbid process was one very nearly allied to inflammation, probably of the strumous kind. This form of the disease was illustrated by a number of cases, models, and drawings. The author did not deem it expedient to dwell upon the various remedies which had been employed, as, with the exception of iodine, none seemed to make the slightest impression either upon the appearance or progress of the disorder.

Mr. Arnott objected to the nomenclature adopted by Dr. Addison. He objected to the term "true keloid" being used in reference to this disease. He considered it identical with scrofulous lupus.

Mr. Solly and Mr. Quain agreed in thinking that this class of tumors were very apt to return after an operation.

Dr. Addison explained the great difference between this hitherto undescribed disease and scrofulous lupus. Whereas, lupus attacked the integuments, and then descended to the subjacent tissues, the great peculiarity of this disease was that it began deeply and affected the skin secondarily.

2. *A New Operation for Ununited Fractures.*

The method of producing union of an ununited fracture, by the operation of resection, has been lately modified by Mr. Jordan, who founds his method upon the following experiments of Syme.

The first experiment consisted in exposing the radius of a dog and removing an inch and three-quarters of it, along *with* the periosteum, and in the other leg, removing a corresponding portion without the periosteum. In six weeks, the cut extremities of the bone which had been deprived of periosteum had only united by a small band of ligamentous texture; whereas, in the other, which had retained the periosteum, the bony union was complete.

In the case of George Dickins, admitted into the Manchester Infirmary, with ununited fracture of the humerus, Mr. Jordan performed the following operation. He first made an incision down to the fractured part, then separated the periosteum from the extremities of the bone; he proceeded to saw off the ends of the bone, leaving the periosteum, and lastly, put the ends of the bone in apposition and replaced the periosteum. The case was then treated as one of compound fracture.

This man had been operated on before, by a surgeon who attempted Dieffenbach's method, by pegs, but union of the fractured bones did not ensue.—*Med. Times & Gaz.*

3. *Dieffenbach's Operation for Ununited Fracture.*

Mr. Mackenzie reports in the Edinburgh Medical and Surgical Journal, an operation for the cure of ununited fracture of the femur, by the method of Dieffenbach, the drilling of the ends of the bone and the insertion of an ivory peg.

The patient, a seaman, had fractured his thigh between two and three years before he was admitted into the hospital under Mr. M.'s care. He was treated in a public hospital in America, and he attributed the want of union to the limb not having been kept steady, the bandages confining the limb having been loosely applied.

The fracture was in the middle of the bone, and the lower fragment was retracted about an inch and a half on the inner side and behind the upper. The limb was quite flexible at the seat of fracture, and was almost entirely useless as a means of support.

The ends of the bone were drilled with a small gouge worked by a carpenter's brace, and a peg, two and a half inches in length, was driven home with a hammer. The presence of the foreign body gave rise to such extensive inflammation and constitutional disturbance, that it was found necessary to remove it at the end of eight days. Profuse suppuration took place, undermining the whole deep textures of the thigh, and it seemed doubtful for some time whether the patient was not to sink from the effects of the operation. He rallied, however, and the suppuration gradually diminished. Firm osseous union took place, and at the end of some months the patient began to make use of the limb in walking. A sinus, however, continued to discharge matter at the seat of operation; and after he had been walking for some weeks, he suffered from an attack of erythema of the limb; suppuration of the knee-joint followed, accompanied by hectic fever, and amputation was performed immediately above the seat of fracture.

The preparation showed the fractured ends firmly united by a large osseous deposit.

Mr. Mackenzie believed this was the only case in which Dieffenbach's method has been practised in Edinburgh. The result was not encouraging as regarded its further trial, at least in the thigh. A considerable amount of success had followed the practice, in ununited fractures of the leg and forearm, in the hands of the London hospital surgeons; but the only other case in which, as far as he could find, it had been attempted in the thigh, had proved equally unfortunate; he alluded to a case by Mr. Square of Plymouth, in which, as in the present case, it had been subsequently found necessary to perform amputation.

4. *Surgery in Dantzig.*

[We endeavour, in our *Chronicle*, to present our readers, month by month, with an accurate view of the condition of the science in all parts of the world. In furtherance of this object, we publish some interesting abstracts from a letter written by a young English surgeon to the Medical Times & Gazette, dated from the Dantzig Hospital.

Will not the present active condition of the profession everywhere; the zeal and earnestness with which new theories are proposed and new practice tested, rouse in us an emulative spirit, which will not consent to be left behind in the great race for scientific pre-eminence?]

New Modification of Syme's Amputation.—We have lately been trying a new method of exarticulation at the ankle joint, a method invented by Professer Pirozoff, of St. Petersburg. The only mention made of it in medical literature is to be found in one of the volumes of the "Zeitschrift für Wiener Aertzte," by Professor Schuh, who has performed the operation several times with excellent results. I have not read Professor Schuh's essay, and therefore, can only describe the method as we have practiced it on the subject. We have two cases in the Hospital at present, which will no doubt have the honour of being the first candidates in Dantzig for this really ingenious innovation on Mr. Syme's operation.

The point in which Pirozoff's operation differs from that of Mr. Syme, is the preservation of the posterior portion of the os calcis, which is left to fill up the heel-flap. The proceeding is obvious and easy of execution. The incisions are made exactly as directed by Mr. Syme: after practising the first from one malleolus across to the other, the operator need only prepare the integuments about a line or two backwards from the inferior surface of the os calcis; he then proceeds to the execution of the second incision across the front of the joint; the astragalus is then exarticulated, and the os calcis divided by the saw behind the posterior extremity of the astragalus. The posterior extremity of the os calcis is preserved by this proceeding instead of the whole being peeled out, as in Mr. Syme's operation; the heel-flap is thus completely filled out by the bone. The saw is then applied to separate the malleoli, and a thin slice of the articular surface of the tibia; the cut surface of the last named bone is then brought into apposition with the cut surface of the os calcis, and the skin flaps accurately united by sutures. The advantages of this operation are obvious:—1st. We obtain a longer stump than by Mr. Syme's operation, and the extremity of the stump is firmer, and far better adapted to bear pressure with impunity. 2ndly. The healing process takes place quicker, and is less likely to be retarded and disturbed, as after Mr. Syme's operation, the cavity of the heel-flap being filled up by the bone. 3rdly. There is no danger of the heel-flap being deprived of the necessary supply of blood, as it will be easy to avoid dividing the posterior tibial artery high up in the wound, as often happens during the execution of Mr. Syme's operation, even by the most skilful hand.

I am bound to add here, that I have seen a case of Syme's operation, in Langenbeck's Hospital, recover remarkably well, where the posterior tibial artery was divided immediately below the maleolus internus; whereas, in another case that came in shortly afterwards, where the artery was preserved during the operation in its whole length, extensive sloughing of the flap supervened.

Of course, I do not mean to imply that the preservation of the arterial branch was the cause of the accident; and am of opinion, as every man of clear sense must be, that the preservation of the artery must be aimed at as much as possible.

Pirozoff's operation is easier of execution than that of Mr. Syme. This is a point I do not particularly urge, as, by diligent practice on the subject, anybody who is able to handle a knife can acquire great dexterity in performing Mr. Syme's operation. A button-hole, or a "window," as we call it here, will certainly now and then make its appearance, just when you are priding yourself upon performing the operation with the utmost elegance: it is a consolation, that the hole injures the pride of the operator more than the patient. Of course, this operation will not supersede Mr. Syme's proceeding, as a perfectly healthy state of the os calcis, in its posterior part, forms a *conditio sine qua non;* but I think it well deserves the attention of the Profession in cases adapted to its execution.

New operation for Vesico-Vaginal Fistula.—Dr. Wagner has operated upon two cases of vesico-vaginal fistula since we have been in Dantzig; one healed after the first operation, but an incontinence of urine remained. The patient was not to be prevailed upon to remain in the hospital, so that no further treatment could be resorted to. Langenbeck and Wagner both treat vesico-vaginal fistula on a principle first introduced into plastic surgery by Langenbeck himself. Its application to vesico-vaginal fistula will, however, scarcely be intelligible without a detailed explanation, which I find it rather difficult to offer.

The margins of the fistula are left untouched; the operation is commenced by performing two semilunar incisions meeting at both extremities, so as to surround the whole periphery of the defect. These incisions are made about a line distant from the edge of the fistula, (or even further, according to the extent of the cicatrix tissue,) and penetrate through the whole depth of the mucous membrane of the vagina. The operator then separates the mucous membrane from the submucous fibro-areolar tissue to the extent of a line or more all around the fistula, commencing from the incisions above mentioned, so that two flaps of mucous membrane result, one on each side.

It will be easily understood that four flaps are now formed, two on each side of the fistula: 1st. The two last-mentioned, formed of mucous membrane, the free margins of which, meeting at both extremities, correspond to the incisions with which the operation commenced. I shall call these the external or inferior flaps. 2ndly. Two flaps, consisting of the other tissues of the vagina, the layer of fibro-areolar tissue with organic muscular fibres, and the external layer of fibrous tissue with numerous elastic fibres, and very vascular. The free margin of these flaps is formed by the surrounding margins of the fistula; these internal, or, according to the position of the parts and the anterior wall of vagina, superior flaps, are broader than the external ones by the distance in which the first incisions were made from the margin of the fistula. It is important to remember this fact for the third stage of the operation. The sutures are then applied as follows.

The sutures at both extremities are merely passed through the flaps of mucous membrane; all the other sutures are first passed through the external flap on one side from above downwards, then through the internal flap in the same direction; the needle is then passed through the same parts on the opposite side in inverse order, from below upwards; all four flaps being thus taken up by each suture. The sutures being drawn tight, the double closure is obvious. The parts brought into close apposition are the raw margins, and raw submucous surfaces of the external flaps, and the inferior raw surface of the interior flaps, the margins of which (they being broader than the external flaps) are turned inwards towards the cavity of the bladder, and, being closely approximated, effectually prevent the urine from coming into contact with the parts below.

I will leave you to judge of the merits of this proceeding, and only add that it is not well adapted for large fistulæ, and quite impracticable in cases where the tissues surrounding the fistula are indurated to a great extent, as the first incisions must be performed on healthy mucous membrane. I do not think that a great number of cases have been operated on in this manner as yet, so that I can offer no judgment as to its comparative merits, except theoretical deductions, which certainly speak in its favour. I think that this description is the first hitherto attempted.

5. *Cancer Treated by Congelation.*

Dr. James Arnott, when using the local application of intense cold as an anodyne in cancer, believes that he discovered that it has, in addition to its power of allaying the pain, likewise a curative influence over that disease. In his paper on the subject [*Lancet*, 15th April, 1854], he makes some interesting statements; but we are bound to say that he has not yet made out the unquestionable therapeutic power of his plan of treating cancer. The subject, nevertheless, deserves attention, especially in connexion with a remark of Dr. Hughes Bennett (quoted by Dr. Arnott), "that were it possible to bring down the temperature of an entire cancerous growth below the vegetating point, we must inevitably kill it."

TOXICOLOGY AND LEGAL MEDICINE.

1. *First Case of Death from Chloroform in the Hospitals of Paris.*

During the seven years which have elapsed since the introduction of anæsthetic inhalations, no fatality, obviously depending on the action of these agents, has occurred at any of the Parisian hospitals. The metropolitan surgeons have not been so fortunate in their private practice, as may be seen by referring to the number of this Journal for July, 1853, and in the Provincial hospitals, the inhalations of chloroform have more than once been followed by fatal accidents. It is true that three cases were reported, in 1848, in which chloroform was supposed to have caused death in Paris hospital patients, but on examination, the fatal issue of these cases was justly attributed to the gravity of the operations which were practiced. All three related to subjects wounded in the affair of June, 1848, in whom it was necessary to disarticulate either the arm or the thigh. Two cases have been reported more recently, in which death supervened in eight and fifteen hours respectively, after the inhalation of chloroform during operations for strangulated hernia. The annals of science contain, however, many examples of sudden death after the relief of strangulation either by the taxis or the knife; and therefore, it was possible, in these cases also, to refer the fatal result to the disease.

It is no longer so; the hospitals of Paris have now contributed their quota to the lamentable necrology of chloroform. On the 7th of April last, M. Richard, surgeon *ad interim* at the Hospital St. Antoine, communicated to the Surgical Society of Paris, a case of death from the inhalation of chloroform, which he had observed on the morning of that day. The patient was a woman of forty years, who obstinately refused to submit to the removel of a pedunculated uterine polypus, unless she was rendered insensible. One or two drachms of chloroform were inhaled from a folded napkin, a free supply of air being permitted. In about two minutes after the commencement of the inhalation, after some agitation and struggling, the pulse ceased to beat, the surface became rapidly cool. Various restoratives were employed without avail. The patient was suspended by the feet; artificial respiration was practiced; divers excitants were applied to the nostrils, pharynx, and chest; flagellation and electricity were called in requisition; tracheotomy was performed, and respiration was kept up artificially for more than an hour, when every one became satisfied that life was extinct.

This recital produced a profound impression; and, as an evidence of its sympathy for M. Richard, the Society of Surgery appointed a committee to assist at the autopsy of his patient.

We find a report of this autopsy in *l' Union Médicale*, for April 18th. It contains, however, nothing worthy of notice except the chemical examination of the blood found in the cavities of the heart, by M. Duroy, a distinguished member of the Society of Pharmacy of Paris. Traces of chloroform were detected in the right side of the heart, while in the blood taken from the left cavities, the reactions indicative of the presence of chloroform were still more striking.

Those who desire further information in regard to this melancholy case, can consult the *Bulletin de Thèrapeutique*, for April 15th, or the numbers of the *Gazette des Hôpitaux*, or *l' Union Médicale*, for the early part of April. O.

EPIDEMIOLOGY.

1. *Cholera.*

The editor of the *New Orleans Medical and Surgical Journal*, in his last issue, writes thus:

"As the last sheet of this Journal was in the hands of the printer—June 28th—letters and journals both foreign and domestic, received at the office of the editor, seem to warrant the conclusion that there exist cholera zones to the North and Northeast, and to the South and Southwest of New Orleans. The cases of cholera in the civil hospitals of Paris for twenty days, ending on the 3d of May last, were, for each successive day, as follows: 4, 7, 9, 11, 11, 17, 16, 21, 19, 24, 41, 76, 64, 45, 48, 26, 21, 23, 28, 18, 25; the number treated in the civil hospitals from Nov. 1, 1853, to May 3, 1854, amounted to 1,782: discharged, 661—died, 897—remaining, under treatment, 224. The 10th and the 11th arrondissements, which have suffered most from cholera, according to the latest accounts, are reckoned among the richest and most salubrious places, especially in the neighborhood of the government offices, (le quartier des ministères,) where several distinguished personages (hauts personnages) have died, and where the disease has been most prevalent. The oscillations of the disease in the military hospital were analogous with those already enumerated in the statistics of the civil hospitals.

"In several of the principal towns in Scotland, cholera has recently appeared. It seems, that in numerous places, as Boston, New York, Nashville, and the cities of Mexico and Kingston, this malady is assuming an epidemic character. From dispatches received in New Orleans, it appears that for forty-eight hours, ending on June 23d, eighteen deaths from cholera had occurred in Nashville, Tennessee. Prof. Quintard, of the Memphis Medical College, in a letter dated June 3d, at the Poplar Springs in Randolph county, Tennessee, says: "I have had about thirty cases of cholera on the plantation during the last three weeks. It is prevailing all through this section of country."

"Although the sanitary condition of New Orleans has been favorable since the close of the epidemic of 1853, and the more so as the summer advances, yet, in the winter, isolated cases of cholera occurred; they still occasionally happen, while the general mortality is rather declining than augmenting.

"From the published reports of interments in the city of New Orleans for the four weeks ending with the 25th of June the mortality has declined as follows: the week ending June 4th, 194; 11th, 184; 18th, 189; 25th, 170.

"Forewarned, forearmed! Observe cleanliness! Unhealthy articles of diet, unripe fruit, exposure to the weather, and immoderate labor should be avoided at all times, but more particularly when cholera prevails. Take no nostrums—take a doctor. Medicines, miscalled cholera *preventives!* are cholera *incentives!*"

[A glance at the newspapers will satisfy the reader that this country is being visited with a third cholera epidemic.

Up to the present time (July 14th), Richmond has suffered but little. Not having a Board of Health organised, it is difficult to make an accurate estimate, but we do not think that more than 20 or 30 cases of Asiatic cholera have occurred in this place.

The best remedy for this disease, so fierce and fatal, may be thus condensed :—

A clean town, a sound diet, and a quiet mind.]

THERAPEUTICAL RECORD.

Chorea.—The number and diversity of therapeutic agents used in the treatment of chorea are well known. We will, however, bring to notice the *last* favorite of the German profession, although, in all probability it will share the fate of others :

℞. Argent. nitras. cryst. grs. iij ; aq. dist., ℥ss. Ft. Sol. The patient is to take three teaspoonsful of this solution daily. The melioration once produced, the medicine must be continued for a short time in decreasing quantities.—*Journal für Kinderkrankh.*

Chronic Urticaria.—A severe case of this eruptive disease was lately successfully treated by Mr. Startin, at the *Hospital for Skin Diseases*, London, in the following manner : ℞. Quin. disulph., gr. xij.; am. sesquicarb., ʒj.; magnes. carb. ℥ss.; aq. pur. ℥viij. Ft. mist. A tablespoonful to be taken thrice daily.

The quinine in this formula is undissolved, and is held in suspension by the magnesia. Mr. Startin advises the use of dilute nitric acid to relieve the itching as being equally efficacious as the hydrocyanic acid, and much less expensive.

Epilepsy.—The journals for some time past have been discussing the advantages to be derived from the use of the cotyledon umbilicus in epilepsy. Dr. Ranking, of Norwich, a gentleman of great experience, declares in the Medical Times & Gazette, that he believes the remedy utterly worthless, having patiently used it in upwards of thirty cases. This writer suggests the use of the *oxide of zinc*, in increasing doses as being worthy of attention.

Hæmorrhage from Leech Bites.—Lastelle, in the *Repertorie de Pharmacie*, suggests the use of the carbonate of iron in obstinate hæmorrhages from leech bites, and states that it is very effective.

Leucorrhœa.—M. Arendt, a German physician, states that he has generally been able to cure ordinary cases of leucorrhœa in three or four days by weak injections of creosote. He uses two drops to the ounce of water, repeating twice or thrice a day. Some mucilage, we think, ought to be added, to make this a proper mixture.

Lupus.—This obstinate disease has been treated successfully by the London profession, with combinations of mercury and cod liver oil in small doses often repeated.

The plan of counteracting the depressing effects of a mercurial course for the cure of syphilis in cachectic constitutions by combining the cod liver oil in moderate quantities is worthy of notice.

Phthisis.—This elegant prescription of Dr. Risdon Bennett, is worthy of attention: R. Tinct. ferri. sesqui chlor., gtts. x.; acid nitrici dil., gtts. x.; syr. zingib. ʒss.; aq. menth. viridis ℥j. Ft. Haust. The cod liver oil to be prescribed in half-ounce doses to be taken in the above draught is more agreeable to the palate, whilst the union of the mineral tonics have been found of great advantage in staying the progress of this dread disease.

Scrofula.—An opinion prevails at *Guy's Hospital* that the efficiency of iodide of potassium is much increased by combining it with the carbonate of ammonia. The proportions usually observed are two to three grains of the iodide, with four to five of the ammonia.

The ammonia acts as a gentle stimulant to the stomach, preventing the iodide from disagreeing; also, by chemical decomposition itself being changed to nitric acid, and then by combination with the base of the salt, liberating the iodine in its free form.

Tetanus.—The English journals speak somewhat favorably of the action of belladonna in this dreadful disease. We notice in the reports of the Nottingham General Hospital, a case of traumatic tetanus recovering under the use of extract of belladonna, in half-grain doses, gradually increased to a grain and a half; using, at the same time, three grains as a suppository, and alternating the doses every four hours.

Tooth-ache.—An American practitioner recommends a solution of copal in chloroform as a specific in tooth-ache, dependent on caries. The cavity of the tooth is washed, and filled with a bit of cotton dipped in this solution; the pain disappears as by enchantment.—*Cosmos.*

Vascular Opacity of the Cornea.—Mr. Critchett, of the *Royal Ophthalmic Hospital*, recommends the use of setons and other permanent issues in vascular opacity of the cornea of long standing, and in subjects of cachectic condition. He declares the use of mercurials, depressants, frequent leeching, &c., only aggravate the disease.

His treatment consists in making an issue in each temple and keeping it open for some months, at the same time allowing a generous diet, and even exhibiting tonics.

BIBLIOGRAPHICAL RECORD.

I.—TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION—VOL. VI.—*Report on the Diseases of the Neck of the Uterus.* By Professor C. D. MEIGS.

The appearance of this work is quite an event in the history of our medical literature.

The subject which it embraces, has been exciting immense attention in the medical world the last few years.

Abroad, besides being extensively written about, it has served to furnish a frequent theme for discussions in learned bodies characterized by uncommon acrimony, even in our reputed dissentious profession.

The work before us is the first elaborately finished contribution respecting many of the mooted points which has been given to our literature; and when we consider the high source from which it emanates—that besides being a most popular teacher and celebrated author, Professor Meigs, as it is well known, enjoys advantages not equalled by those of any man in the country, for observing the diseases in question, it is natural that it should excite the greatest attention.

With characteristic zeal, the learned Professor proceeded to his task, and has executed it, as though it were indeed to him, a labour of love. The report occupies 112 pages of the society's transactions, and because of its brilliantly coloured plates is certainly, to the casual observer, the brightest ornament to that rather ponderous volume. In it we have all the author's peculiar style of writing, which has been so much commented upon, and which we can but think is somewhat unfortunate for a scientific treatise, inasmuch as its thorough comprehension, often requires an amount of labour which is both irritating and fatiguing to the reader. It is a style which limps and leaps at the same time, and it not only jerks one along in a very fantastic manner, but also, often forces him from the beaten highway, even when that would do as well, into the most uncouth, and altogether untrodden lanes and bypaths. But, after all, faults like these it may be said, are but as mere ripples on a stream, the clear waters shine out beneath them, to the attentive eye, sparkling in many instances all the brighter for the agitation.

It would be hard for Professor Meigs not to write instructively on uterine diseases. With eminent ability associated with uncommon industry and enthusiasm, he has seen so much of such disorders, and noted so well the impressions made upon his mind, that he has become literally filled with the most valuable information with regard to the whole subject. His manner of communicating this knowledge, however, is to our mind, not always happy. Instead of adopting a systematic arrangement, he frequently gossips over his subject in the most irregular way; and upon points considered of doubtful settlement, he likes to indulge in a dogmatic spirit of assertion, which is not compatible with the searching caution and the calm tone of the scientific enquirer.

But notwithstanding, his admitted capabilities for the work, we feel bound to say that his report to the American Med. Association on the diseases of the neck of the uterus has not fulfilled our expectations. That it is an able paper, we do not intend to deny, but it is not such an one, as in our opinion the profession had a right to expect from the learned author on an occasion of the kind.

In it he discourses to that august body, most minutely about much that is familiar, and therefore unnecessary in an article of the sort, and has left out the discussion of all those obscure and intricate points, which we believe him well capable of illustrating, and which it is our impression was contemplated by the society. We cannot admit the line of argument he employs to show that mere elementary and purely clinical instruction was most important for him to give on these subjects. Information of that sort abounds, with regard to that most debatable of all diseases, inflammation of the cervix; the works of Whitehead and Bennett are as clear as anything which he has presented, and they have been extensively read in this country, whilst most of the modern systematic treatises cover all the other ground taken in his report.

Now if the profession will not be enlightened from these sources, we cannot see how Professor Meigs, by occupying the same ground, and that too in a manner not more complete, could expect to add to our information on the subject. Herein then is our disappointment. The reporter has taken the space for the illustration of that portion of the history and treatment of these diseases, before equally well demonstrated, which ought to have been appropriated to more important matter.

He has considered the wants of men, who have chosen to lag behind the advanced knowledge of the day, instead of the claims of science, which to another mind we believe, would have been deemed paramount.

We hoped to have heard from the professor, the results of his vast experience in the complete illustration of this important class of diseases, which involved so many peculiar considerations to the practitioner. Their delicate nature demands that bold guiding points should be erected by great pioneers like himself to lead with unerring certainty the way to his less fortunate followers. With regard particularly to inflammation of the cervix, we wished to have his views of its natural history—its origin, predisposing and exciting causes, its progress and natural termination. Their ready diagnosis, and the flourish about the unerring certainty of the "antiphlogistic contacts of the nitrate crayon" in curing these diseases, do not comprise all we want to know about them.

Can they be prevented?—what habits, what course of living, or what other steps would be necessary to save the delicate mother from this afflicting disorder now becoming so common—a disorder which while it can be so easily cured, involves at the same time a process of treatment stunning in its impression. These, and other obscure points of this debatable class of disease we had hoped to have seen discussed by Professor Meigs in his report. Had he taken this direction we believe he could have thrown over them a flood of light, and given us a work more appropriate to the occassion, and of far more scientific value.

We shall proceed to notice all those points in the report which are of interest, compatible with the space allotted us for the work.

After some preliminary remarks with regard to the anatomy and physiology of the uterus and its appendages, together with the means necessary for the correct diagnosis of the diseases of the neck of that organ, the learned Professor launches at once into that most vexed of all questions in modern times, inflammation of the cervix. He makes the proper treatment of a troublesome leucorrhœa, the necessity for the use of the speculum in these cases, and holds that albuminous discharges are pathognomonic of disease of the neck of the uterus.

In this he differs from Bennett and others, who make the existence of yellow leucorrhœa their test of the presence of inflammation of that part of the organ. In this view they have our concurrence. We are convinced that if leucorrhœa is to be made the guide, that form of it would be the most valuable and unerring. Every one acquainted with these examinations must have seen the albuminous exudations, protruding from the cervical canal, which is so accurately described in the report, and we believe with the author, (although it is doubted by many) that it is always associated with the disease he describes. Still it does not serve as a reliable guide to the use of the instrument, because from its nature, it does not in every case escape externally, unmodified. We have often had our patients to deny the existence of leucorrhœa, and yet upon using the "metroscope" have found this exudation. This fact has led us to believe that it is easily washed away if the vaginal syringe be habitually used; and if not so, it may become so modified by the absorption of its more fluid parts, as altogether to lose its characteristics. The author himself says, "this albuminous discharge is not invariably present as a pathognomonic characteristic," and accounts for it by vague allusions to certain "variable degrees of vital excitement in the muciparous apparatus in different cases, and at different times."

This is a very important subject. The question arises, by what signs, local and general, are we to be guided in submitting the woman to the severe ordeal of a metroscopic examination. In regard to this matter our author is certainly not so explicit as we think he might have been. External explorations, for instance of the chest, may be conducted in every case, whether there be necessity for it or not, but when we come to make an examination of this character, there should exist in the mind the clearest necessity for its employment. Now we are not one of those who ignore and decry the use of the speculum uteri; on the contrary we regard it of inestimable value in the diagnosis, particularly of the diseases under consideration, but it must, we think, be admitted that many hysterical women, (whose morbid desire for sympathy will often urge them to undergo any infliction) have been, and are daily made the subjects of an examination by it unnecessarily. Indeed its promiscuous use appears to be somewhat epidemic in the last few years. In nearly every place there may be found many excellent men in the profession undergoing the complaint. It is for this reason, we think it would be a desideratum to have more explicit information on this important question. It would not only tend to an avoidance of the unnecessary use of the instrument, but it would lead the practitioner to take that firm stand, when its employment is demanded, which is required for him to treat successfully such cases, and hence would put a stop to that practice which Professor Meigs deplores, of sending their patients away from home for the necessary treatment.

Passing from this point to the consideration of the disease, as it is revealed by the speculum, the reporter appears perfectly at home. He has introduced five plates to exhibit the state of the cervix in such cases, which, although in the early part of the report, he admits his difficulty with regard to procuring good illustrations for the work, he nevertheless says are as perfect as daguerreotypes. In this we cannot concur.

To our mind the plates are sadly overdone in design—hugely so in colour. Nor is this all. The spirit of the artist becoming rampant, infused itself into the author, and hence we find much of his report with regard to these affections is as highly coloured as the plates which accompany it.

With regard to the exact pathological state of the diseased cervix, the author, like his predecessors, does not help us much. So far as he is concerned, that much disputed point remains unsettled. He ignores ulceration, contends that the epithelial covering, although very delicate, is perfect over the "raspberry" surface, but, further than this, he does not appear to have any very clear views of the morbid state. Indeed, he seems to content himself with their clinical study alone, and does not appear to be troubled about the origin and intimate nature of these affections of the uterine neck. To their existence he attributes, through the sympathies of the organ, the constitutional vitiation accompanying the state. It will be hardly necessary to follow him through his descriptions of the several forms which the disease may assume, (although his remarks are very interesting, and are worthy of attentive perusal;) we shall therefore pass on at once to his treatment, which is pretty much the same for all.

Upon this point our author is truly eloquent. He might, indeed, have adopted the ancient hero's brevity of expression. He came, he saw, he conquered. His confident assurances of recovery are truly enchanting, and his progressive and rapid cures altogether admirable. This matter requires looking into, and we cannot forbear expressing the regret that he did not append to his report some statistics on this interesting point.

We must not be considered as unreasonably sceptical; on the contrary, we have, ourselves, seen benefits too marked and unequivocal from topical treatment alone in such cases, for us not to be its ardent advocate. *But there is such a thing as a relapse in such diseases.* It was this that we wanted to hear about.

We have had complete and permanent recoveries in some cases, but in others, although benefitted from time to time in their general health and in their local condition, the result was not so satisfactory. And we have known eminent gentlemen to have patients believed cured, to be returned on their hands again and again.

Although all other writers refer to it, our enthusiastic author says nothing about this important feature of these diseases.

We would warn the uninitiated not to imbibe to their fullest extent our author's sanguine views, lest the "ghost of the murdered Dane" startles them by "walking again on earth."

The report, we hold, is deficient in this respect; for the claims of science are imperative and will not be so easily satisfied, as our author appears to be, with regard to the history of this important class of diseases.

In his first case, the reporter says, "as the inflammation (of the cervix) vanished before the therapeutical power of the remedy, the womb returned rapidly to its form and dimensions," &c. He appears to take it for granted that the reader will assume that the recovery of her general health was correspondingly progressive and complete.

His second patient "was rapidly cured."

His third had retroversion, with inflamed os, &c.

By means of the annular pessary the displacement was redressed; chalybeates were given: walking exercise directed; "*his* topical treatment applied to the diseased surface, and she soon recovered *a good* state of health."

The result of his last case was far more satisfactory, and must have been truly gratifying to her eminent attendant. This woman, since her recovery,—although her's had been the most obstinate case,—has given birth to a robust infant. Still, we would like to have heard more of her after this, with the view of settling this point, with regard to the tendency of the disease to return. We are thus particular in our enquiries, because (as it is well known,) there is quite a large party of highly respectable pathologists, who do not believe in this thing. They contend that it is the constitutional disorder which creates the trouble, and not its reverse. Now, to this party, as may have appeared to the reader, we do not belong; still, we want the truth elicited, and therefore must regret that Professor Meigs should have paid so little attention to this question in his report.

We next come to his topical treatment of inflammation of the cervix. This is by the "antiphlogistic contact of the nitrate crayon," applied every 5th or 7th day, until recovery. When we first read about this antiphlogistic contact of the nitrate crayon, &c., we paused.

The kind writer very considerately came to our relief, bidding us not to despair, and we humbly thanked him for saying, in a few sentences more, "we shall shortly explain the meaning and intention of the phraseology we have employed as to antiplogistic applications of the argent nitratum." After describing the treatment in the next case, the ever watchful author appears to recur to our dilemma, and he again graciously promises that "he will hereafter endeavour to show and explain, at greater length, wherein the true antiphlogistic therapeutical force resides in the contacts of the nitrate crayon."

After a while we come to this promised land. Hearing so much about this mysterious "force," we confess we approached this explanation with anxiety, not unmingled with dread. We passed the ordeal, and to the impulsive reader, who most likely will approach this discussion with like feelings to ourselves, we are happy to say, "be not alarmed; *there is nothing in it!* He means, *you must not apply it too much, nor too little, but you must contact it antiphlogistically, by an ideal!*"

We have a suggestion to make here, which we believe will be conceded to be a regular Baconian induction. The author says, "In this way, (viz., antiphlogistic contacts, &c.) we may compel the drusy or tuberculous eminences to sink down again to their place, and give, by solidifying the epithelium, a firm physical delimitary support to the before debilitate capillaries that rise up in the form of a soft molluscum." Now, if this be all which is required to be done, we ask, why not use collodion? By it, we should fulfill the indication precisely and certainly, without that risk of too much or too little cauterization—it could be even applied without the aid of "an ideal." We are aware that this preparation has been recommended and used for these forms of diseased uterine neck; still, we claim a right to a *new* discovery, for ours will be "the antiphlogistic contact" of the collodion pencil.

Seriously speaking we do not comprehend or see into the niceties which our author so dwells upon, on this point; certainly, we are far from sharing with him in his belief in this peculiar and wonderful power of the nitrate of silver, in these affections, over everything else.

For this reason we beg, with great deference, to make the suggestion that, in his next obstinate case, he should make a trial of the *tincture of iodine.* This article has been recommended for this purpose by Dr. Churchhill, but long before, we had been in the habit of applying it to the treatment of these inflammations of the os. Let him paint his drusy surface with this substance, and if his ideal be not convenient, he may do it without, and we believe that he will soon have ample proof that something else will do as well as the antiphlogistic contacts of the nitrate crayon in such affections. We even think it preferable to the lunar caustic in all such cases as those which he has described, and we know that it has rapidly healed where a long course of the caustic had failed.

But what is all this about the topical treatment of these diseases. In France, Jobert, we believe, and others, burn it out with the actual cautery; in England, Dr. Bennet "melts" down the indurated cervix by the strong caustic power of the acid nitrate mercury; but here at home, Professor Meigs harps continually, with a sort of musical rythm, upon "the antiphlogistic contacts of the nitrate crayon."

Now we submit if the simple treatment recommended by our author does not give countenance to those who deny that the use of the speculum is required in these affections. For it must strike every mind that a malady so simple, after all might be insufficient to *produce* so much constitutional distress, and that if so, general measures, although not so prompt might serve equally well for its removal.

It is time this question was settled and some definite principle established to guide the practitioner. This can only be done by a more searching and comprehensive enquiry into the nature of this disease, and its bearings in various ways, upon the habits and constitution, than any which our author appears to have made. Until all these points are cautiously and faithfully made out, we must expect to hear of contrariety of opinions among practitioners with regard to its treatment.

After a careful perusal of his report, we are unable to see wherein Professor Meigs has contributed to our stock of knowledge, respecting inflammation of the cervix uteri.

Notwithstanding, we believe that those refractory gentlemen, who will not learn about these diseases from other sources will find in the work much valuable information, and we therefore recommend it to their perusal.

The next subject touched upon in the report, is retroversion, which the author asserts constitutes "seventy-five per cent. of all cases of sexual disorders, of a gravity sufficient to require appeal to medical advice,"—a remark which we think should be received with some qualification. He discusses very properly, this subject in the report, because it is the opinion of the committee "that these cases of retroversion do so far interest the state of the cervix as to bring them within the scope of their enquiries." In regard to the much disputed point as to whether the hypertrophy always associated with retroversion is a cause, or a result of the displacement, our author's views are very decided. "But, says he, let it be remembered that the womb is constitutionally prone to set off on a race of hypertrophic development, and we may understand how it shall be readily provoked to commence a process of hypertrophization, by the awkward, unnatural, and irritating posture it acquires in retroversion." Here, we see, he does not trouble himself with even an allusion to the doubt which many have expressed, that this state of things is the result of the malposition. Indeed such a course was entirely unnecessary, because in his subsequent remarks he proves this point beyond all question. Having had rare opportunities to observe this state, he has made use of them, to the great advantage of science.

This part of the report is replete with interest and instruction. We say he proved the point that the hypertrophy was but the result of the fault in position, and he did it by showing that when the displacement was rectified, the organ progressively returned to its proper dimensions. His principle of treatment is to reposit the womb, and maintain it in situ. "We repeat," says he, "that a considerable number of instances, in which the womb was greatly augmented in dimensions, in consequence of the irritation superinduced by retroversion, have been treated with the happiest success by the reporter, on this principle." "To show how great is the change wrought in the hypertrophied uterus by reposition," two figures are annexed in his 10th plate, which are very instructive. Indeed we beg to call the reader's attention particularly to this portion of the report. It treats in the most lucid manner of matters of very nearly daily occurrence to the general practitioner, and furnishes many hints with regard to diagnosis, of the greatest value.

"We have," says he, "met with repeated examples of such misinterpretation of the case; women being supposed to labour under tumours within the pelvis, whereas the supposed tumours were nothing more than the posterior aspect of the corpus and fundus uteri; turned over and touched through the posterior membranous wall of the vagina."

He makes no distinction between version and flexion of the uterus, other than that the former "retroversion, with an unbent womb, is a mere accident or chirurgical disorder; whereas retroversion, with a bent or angulated uterus is a case in which the womb itself has become diseased."

In the general, the latter remark is true, still it cannot be denied that flexion may occur without preexisting disease in the womb itself, and moreover it is likewise known to be a congenital fault. With regard to their treatment, it is true that the same in many respects is applicable to both version and flexion, and therefore no distinction becomes necessary, yet for the sake of diagnosis it is highly important to give separate and distinct accounts of the two states. We shall conclude our notice of the report by examining the treatment which is proposed by Professor Meigs for retroversion. Before doing so, however, we will briefly call attention to another subject embraced by the committee in their paper.

This is simple hypertrophy of the cervix, in which the other parts of the organ are not concerned. We confess to some surprise that this subject did not obtain more attention. In our view it should have occupied a very prominent place in a work devoted to diseases of the neck of the uterus. The only notice which it receives, is in a note, alluding to one case, which is illustrated by plate 13, (fig. 1.) It occurred in the case of a maiden lady some thirty-five years of age, and was simple hypertrophy, without "signs of positive inflammation of the part," although the author assumes its existence because it was cured by his antiphlogistic contacts.

The author appears to be of opinion that this form of disease is not often to be met with in practice. In this we differ from him. We believe it to be a frequent lesion, and one of much importance from many considerations. Not the least important of these is the obscurity which is involved in its general symptoms. Unlike other uterine disorders, the constitutional symptoms which it induces, are not always such as signify the source of the disorder. For this reason we believe its existence is frequently overlooked. It does not necessarily involve functional disturbance of the organ, although it is invariably associated with sterility, and there is nothing in the increased growth of the part to interfere with its sensibility. It appears to act by exciting morbid action in the environs, by contact alone. Now it depends upon the location of the part encroached upon, what local symptoms will be induced. We have seen preternatural irritation of the bowels, unassociated even with tenesmus as a constant symptom, result from an elongated and hypertrophied cervix, coming in contact with the rectum.

The cervix was in no way sensitive, there existed no symptom of uterine disease, and the case was mistaken and treated for a long time as one of chronic diarrhœa.

We shall pass over the remainder of the report, which with fragmentary allusions to many subjects, includes the diagnosis and treatment of uterine polypi rendered in a manner worthy of the author's great reputation, and conclude with some account of his method of treating retroversion. His principle we have already announced; it is to reposit the womb and maintain it in situ. To do the latter, he in common with the most experienced men of this and other days, recognises the necessity of a recourse to mechanical treatment, in the way of the pessary. Occasionally we hear of those who denounce the use of this instrument. We believe that in doing so, they assert the fact that their field of observation has been very limited in such affections. There is nothing truer than that some such means are actually necessary—not to cure, but in many cases, to give comfort to the sufferer, who without it would remain in perpetual and wearing pain.

Our author recommends a new form of instrument, which he calls the annular pessary, first decribed in his work on Diseases of Women. In this we believe he has made a decided advance from his former views on this subject. In his earlier publications the globe pessary is earnestly recommended in the treatment of retroversion. We confess we never could see how this form of instrument could be expected to overcome a retroversion, and although it can be worn by many women without discomfort, it is not so with all. There are many cases of this form of displacement, particularly in young and muscular women, which are accompanied with spasmodic contractions of the vagina, and excessive irritability of the environing organs. The instrument here, produces the greatest embarrassment and suffering, by actually increasing the displacement, in a manner which, we think, must be obvious to every one. We believe that there is many a practitioner, still bearing a grudge against our author for some difficulty into which he had been led by following his recommendation in this particular. His annular pessary promises more; it is convenient to procure, and is of very easy application. Here is his description of its manufacture, and mode of application.

"Take a piece of watch-spring of the proper length. That is to say, if a pessary of three inches diameter is required, take a lamina of watch-spring nine inches and three sixteenths in length. Bend it in a circle and rivet or solder it, to make an annulus 3 inches in diameter. Serve it all around with bobbin or large twine and then dip it again and again in melted virgin wax, so as to infiltrate the threads completely. Polish the waxen surface with the hands. This ring which is as elastic as watch-spring, can be compressed between the thumb and fingers: and then introduced into the vagina without giving pain. As soon as it has taken its place it expands again, and recovers its original form."

This report, we perceive, is printed and put forth as a separate work. As a treatise on the subjects which it embraces, it is liable to objections precisely opposite from those we have urged against it as the report presented to the American Medical Association. In the latter form it is too minute about mere elementary matters, whilst for the former it is too fragmentary in many of its parts, to constitute an expose of the whole subject. Indeed it would appear that, in thus presenting it, its learned author having found the public ready to bite, was not very choice, but baited with the meat most convenient to his hand. P.

II.—*The Science and Art of Surgery.* By JOHN ERICKSEN, *Professor of Surgery in University College, and Surgeon to University College Hospital.* Edited by JOHN H. BRINTON, M. D. Philadelphia: Blanchard & Lea.

We hereby chronicle the appearance of another treatise on surgery, emanating from the English school, and as a matter of course, seized upon by our Philadelphian publishers, edited by a Philadelphian, with *additional illustrations*, notes by the editor, &c. &c.

Mr. Ericksen's book is characterized by that calm and sober reasoning, that unpretending and practical good sense, which peculiarly marks the modern British surgeon. The successor of the great Liston, in the University College Hospital, he exhibits in this treatise the same moderate tone and yet firm and decided expression of opinion as his well-known predecessor.

We are sure, then, that the profession and the student will receive this work with pleasure. Its practical character, to which we have alluded, will make it all the more agreeable to the American reader.

The surgeon in this country, as a general rule, is also the physician. He has no time, surrounded as he is by disease in all its forms, both medical and surgical, to study new theories or invent ingenious instruments. He must be taught to simplify, not to complicate; he must be useful, not learned. Hence it is that such Surgeries as Ferguson's and Liston's have met with much better success than Malgaigne's or Velpeau's, and hence we prophecy for Mr. Ericksen's new work a favorable reception.

In the preface, Mr. Ericksen tells us that his original intention was to confine himself to the consideration of operative surgery, and that he afterwards added, under the head of First Principles, some remarks on the nature and treatment of Inflammation, with other general observations. If we were disposed to be hypercritical, we might say the after-thought of the author will not bear comparison in its method of execution, with that portion of the work in which he carries out his original design. His general observations are not always well introduced or particularly instructive. But in the consideration of surgical diseases, injuries and operations, we cannot too highly recommend the mode of explanation or the simple and candid expression of opinion on the part of the author. Here lies the value of the book.

The editor, Dr. Brinton, in his preface declares, (we are glad to say,) that he has added or corrected but little, except some additional notes on American surgery—and we must say, that we could have very well dispensed with some of these. For instance, in the description given by Mr. Ericksen, of the preparations to be made for a surgical operation, he includes the administration of chloroform as one of the usual accompaniments, unless positively contra-indicated. Dr. Brinton adds a note, (p. 79,) which he devotes to a description of the anæsthetic effects of sulphuric ether, declares it to be possessed of quite as much practical advantage as chloroform, and closes his remarks with the following sentence: "The numerous fatal consequences, however, which have attended, and are daily resulting from, the employment of chloroform, *in Europe*, have led to the almost entire abandonment of its use in this country."

Now, we do not think this statement is correct. It is strange that the fatal results of chloroform in Europe should have led to its abandonment in this country, while its use is still persisted in by the European profession, in whose hands it has produced such disastrous consequences.

We know that the hospital surgeons of Philadelphia have, to a great degree, substituted the ether for chloroform, but we beg Dr. Brinton to recollect that Philadelphia does not include the three and thirty States of this Union, neither does that respectable city contain the concentrated wisdom of the American profession. We believe, that in private surgical practice, there is at the present time at least five pounds of chloroform administered to one of ether. It is probable that the influence of our Philadelphia brethren will have its proper weight, some of the eminent New York and Boston surgeons have also discontinued its use; neither are we prepared, now, to say that the ether is not a safer anæsthetic than chloroform; but we deny that at this time the majority of the profession have abandoned that agent.

The publishers, Messrs. Blanchard & Lea, have brought out this Surgery in very handsome style. Its illustrations are original and much more forcible than we often see. It can be found at Mr. J. W. Randolph's, through whose hands we received a copy.

III.—HAND BOOK OF CHEMISTRY:—*Theoretical, Practical, and Technical.* By F. A. ABEL and C. L. BLOXAM; with a preface by Dr. HOFFMAN. Philadelphia: Blanchard and Lea. 1854.

The publishers have conferred a real benefit upon the student, in presenting in such an attractive form, this very able work. As an evidence of its completeness, which should not pass unnoticed, it may be urged that, the American editor could not find any reason to follow a rule common on such occasions, by appending his name on the title page; although the enterprise of the publishers led them to enrich it by the addition of many appropriate illustrations. The work it is acknowledged supplies a want which has long been felt.

On theoretical chemistry the student has been kept informed by many publications, containing the true state of the science from time to time as was required by its almost daily advance, but when he came to step into the laboratory, he found himself at a loss where to seek for guidance, on many points connected with the discoveries of the day. The work before us is eminently suited for this purpose.

The authors appear to have entered upon their undertaking with minds fully imbued with the wants of beginners in practical chemistry. This has enabled them to fulfill their purpose the more perfectly, because it led them into a complete illustration of all those trivial matters, necessary to successful manipulation, and which when not understood serve to discourage, and sometimes to disgust the student. They speak from the laboratory, and record, as they progress with the manipulations necessary to the illustration of the subject before them. Although it does not profess to do more than to present the details of practical chemistry, yet it exhibits the theory of the science sufficiently well, and that too in a manner, to our mind, better calculated to make a lasting impression, than when treated of apart from the manipulative art. Including the introduction the book is divided into four parts. The first, or the introduction, comprises specific gravity, explanation of chemical terms, nomenclature, equivalents, affinity, and the physical conditions of bodies.

The second treats of apparatus and their uses in the laboratory—showing how to make many forms of apparatus—and ends with a description of the use of the blow pipe, and glass blowing.

The third includes elementary chemistry, and considers the metals and non-metallic substances.

The last part is devoted to analytical chemistry. A farther attempt at an analysis of this work would be unsatisfactory, and therefore highly unnecessary, and we shall conclude our notice of it by calling attention to the very great importance of the subject of which it treats. As an accessory branch of the medical science, a knowledge of practical chemistry has now become almost if not quite a necessity to the thorough physician. Every day something is liable to meet his eye, for the elucidation of which recourse must be had to the laboratory. The public too expect medical men to be good practical chemists, and refer with confidence to their skill, on all such matters. Not to the medical science alone, the necessity for practical chemists is felt generally, in most of the pursuits of the time. We know of no way by which the zealous student can arrive so soon at distinction and emolument as through this channel. We recommend the enterprising to take up the subject, and moreover to take the labours of Messrs. Abel and Bloxam as their guide.

The book is gotten up in a very handsome style, and besides being a most valuable addition to it will serve also as an ornament to any library.

IV.—*The Virginia Springs.* By JOHN J. MOORMAN, M. D., Resident Physician at the White Sulphur. Second edition. With Map and Plates, &c. &c. Published by J. W. Randolph, Richmond, 1854.

We hope that the enterprising publisher of this work will sell, during this summer, at least three thousand copies; for we desire to see that number of visiters to our Springs, and we are very sure that each one should be furnished with this admirable guide book through the Virginia mountains.

Dr. Moorman has resided in the midst of the mineral spring region for many years, and his book gives evidence of careful study and long experience in the use of its waters. Although as the resident physician of the White Sulphur, he has devoted a good deal of space to an analysis and description of the therapeutical effects of that celebrated Spring, yet he shews a desire to do full justice to the virtues of the other mineral waters of that picturesque and delightful region.

There is also, accompanying this work, an admirable map of Western Virginia, giving to the traveller the clearest idea of the various routes and distances from point to point. This is a great addition to the work. There are also lithographic views of the various Springs described throughout the book, and as poorly as they are executed (for we cannot praise them), yet the rustic cottages, with groups of mountain maples, and bright glimpses of mountain peaks and mountain streams, are enough to tempt one away from cholera-infected towns, and make them eagerly long to be *en route* for the Virginia Springs.

Let the Southern gentleman who is fleeing from his tropical home in Alabama or Louisiana, and is seeking pure air and a healthy climate, read this unpretending but truthful sketch of the twenty-four principal Mineral Springs of this State, with their variety of chemical composition, their thermal baths and their charming climate; and if he can reconcile it to himself, then, to turn his back upon these advantages at his own door and amongst his own people, and persists in spending his time and money in the brick barracks at Saratoga or some other Northern watering place, where he is in daily fear of having himself mobbed by the negro waiters around him, we can only say that we can neither approve of his taste, or advise others to follow his example.

V.—*Guide to the Hot Springs.* By THOMAS GOODE, M. D., Richmond, 1854. Published by J. W. Randolph.

This little pamphlet is styled by its author the invalid's guide to the Hot Springs of Virginia. He gives a sketch of the medicinal properties of the water, with cases illustrative of their effects, and contrasts their therapeutic powers with those of the celebrated German Hot Baths, as *Weisbaden*, *Wildbad*, and *Carlsbad.*

The potency of hot baths over a great variety of disease, is now undisputed, and our Virginia Hot Springs combine every advantage. Situated in a lovely country, the victim of neuralgia, chronic rheumatism, paralysis, deafness, and many other painful disorders, finds here a magnificent natural medicated bath of a temperature varying from 100° to 106°. The experience of many years has proved beyond doubt its curative power, and nothing has prevented this spot from being besieged by invalids, but the difficulty of getting to it. This difficulty will soon be in a great degree removed, and then we expect to see these springs holding a position in this country analogous to the great German Spa's of Carlsbad or Weisbaden.

EDITORIAL AND MISCELLANEOUS.

THE VIRGINIA FREE HOSPITAL.

We were pleased to know that the visitorial board of the Medical College of Virginia, at its late meeting, resolved to ask of the Legislature the erection in this city, of a State General Hospital.

It is indisputably the duty of every government to protect and comfort the suffering poor within its jurisdiction. Hence we see the munificent provisions made at Williamsburg and Staunton, for only one class of unfortunates—the insane. Hence also the liberal sums unhesitatingly devoted to erect the asylum for the deaf, dumb and blind, also situated at Staunton. These large appropriations have been applied to the relief of a few of the *special* ills to which man is heir, and the great mass of disease, both medical and surgical; the thousand grievous ailments which afflict humanity have been entirely unnoticed.

We have now a hospital for the education of the blind; how much better build hospitals to cure blindness? If it is a boon to make a poor blind boy read and write; to throw some palliative ray of comfort into his otherwise darkened brain, how much greater boon to give him the full blaze of God's blessed sunshine, and enable him to participate in all the pleasures which sight would bestow?

Again, when we recount all the dreadful deformities often met with amongst us, the malignant diseases, the agonizing tumours, the multiform accidents which surround us on every side, it is impossible to dispute this fact, that it is the duty of the state to give its poor citizens all the aids which an ever-advancing science can render, to relieve their physical misfortunes or ameliorate their bodily sufferings.

The reasons why this necessity has never yet been urgently felt by the state, are very apparent. The medical profession have heretofore voluntarily, and without fee or reward, save that which old Booerhave declared would be received at the hands of a just and merciful God, granted kind attention and scientific aid to the poor victims of disease around them. There is not a medical man in the state who has been for any length of time in active practice, whose heart has not grown tender at the cry of distress, and whose hand has not been ever ready to bestow relief and comfort to the poorest sufferer in the community; or, if an exception may be, by chance, pointed out to this rule, and it may be that there are exceptions; he stands as a foul blot, upon a profession who know him and despise him.

Another reason also may be found in the fact that the state has been sparsely inhabited; the means of bringing together any number of persons, so as to give them professional aid, have been wanting. Before the era of railroads and canals, it was useless to erect a hospital in Richmond for the benefit of the poor people of the state generally, when the expense and delay of a journey to that point made the boon worthless.

The period has, however, now arrived, when the state must assume its duties. It is impossible for the medical profession to grant relief and advise curative measures to the large class of unfortunate poor who desire it. They have become too numerous. The necessity for surgical aid, particularly, has been doubled since increased travelling facilities, and all of the dangers accompanying them, have been vouchsafed us. The number of persons in our midst who are unable, from pecuniary reasons, to seek professional assistance, and remunerate properly, well educated and practical surgeons, have greatly increased. The consequence is that many of the surgical diseases, especially, go unattended to, for the reason that the skillful hand and the practiced eye are not to be found at every cross-road, but must be sought for. Hence, we say, the legislature must feel what is due this class of its inhabitants, and we expect to see the State Hospital bill pass without a murmur.

As this is to be a great public charity, as a matter of course, there must be no charge for admittance; in other words, we want a Virginia *Free* Hospital for the benefit of its *free* poor population. The rich need no such institution. The slave population *may*, sometimes, for want of proper care and nursing at home, require hospital aid, and it might be well to have slave wards attached to the proposed institution; but every slave should be expected to pay *full value* for services rendered. At their present high value, they are certainly worth their doctor's bills, and one of the advantages which the profession will derive from the proposed hospital is, that it will break down those private speculations in this city, which have, by putting their rates of admission at a very low point, seriously injured the emoluments of the profession.

These slave wards, then, charging the owner in full for services rendered, would not interfere with the profits of the practice of medicine, but would enable the Hospital to enlarge its accommodations and extend its sphere of usefulness for the benefit of those who, unable to purchase medical aid, and having no one to obtain it for them, appeal to the government for shelter and assistance.

Lastly. The Medical College of Virginia will then present to the Southern medical student the only other desideratum which he can ask for —that is, an ample field for clinical practice. We, therefore, hope to see the Board of Visiters organise an independent corps of Clinical Teachers for this Hospital. Let the student see the great principles of medicine, as taught him from the professor's desk, applied so as to produce practical results by the clinical teacher. The many eminent and experienced general practitioners in and around this city will afford the student this opportunity. Let them them be selected to officiate, each for a given period. Ask them to throw the whole weight of their character and influence in behalf of this Virginia school. Ask them to unite together with the present effective corps of Professors in making the Medical College of Virginia, indeed, a perfect success. And then the State might point with equal pride to her noble University, seated amongst the mountains, and her more youthful, but not less important, Medical Institution.

New Appointments.

We perceive that Dr. Alfred Stillé has been appointed to the Professorship of the Theory and Practice of Medicine, and Dr. John Neill to that of Surgery in the Medical Department of Pennsylvania College. These gentlemen have for a long time been engaged as medical teachers, and from our knowledge of their acquirements in the departments of medicine to which they have been appointed, we feel sure that they will discharge their duties as Lecturers in a manner that will reflect honor upon themselves, and add greatly to the reputation of their Medical College.

This is the third medical institution now in active operation in the city of Philadelphia, and its Faculty, composed of young and ambitious men, we doubt not will soon elevate it to the high position of its two older rivals. We heartily wish them all well-filled lecture rooms. We love the *old school,* as it is affectionately called; for did not our fathers study there? and the *Jefferson* school may point with pride to its Mütter and its Meigs; but candour compels us to declare that we hope they will not matriculate one solitary Virginian student.

We believe that the *Virginia Curriculum,* with its ten months at the University, and its two courses of lectures at the State Medical College, offers to the Southern student more advantages than he can obtain elsewhere. When he has passed through this course of study, we will gladly tell him, go seek new fountains of wisdom from the able faculties of Philadelphia and New York; sit under the teachings of the profound Jackson, the experienced Wood; learn new views of physiology from the original Draper, or hear the experience of that brave old surgeon, Valentine Mott. But home *first;* Virginia first; our own Colleges first. Our professional pride will no longer permit us to make the degrading acknowledgment that we cannot teach to our students what we pretend to be masters of ourselves.

M. Brown Séquard.

It was announced in our last number that the friends of M. Brown Séquard applied, in his name, to the Visitorial Board of the Medical College of Virginia for the vacant chair of Physiology, in that institution, and that he received the appointment.

We are pleased to state that letters have been received from that gentleman's friends in Paris, declaring with perfect confidence that the new professor will at once assume the duties of his position. He is at this time on a visit to the Island of Mauritius, and hence has not been heard from personally. We give our readers the following extract from one of these letters. It is written by Dr. Broca, his intimate friend, and may be translated thus:

"For my part, sir, I have felt a lively emotion at the noble sentiments expressed in the letter announcing to M. Séquard his election. Your young and great nation throws aside the prejudices which oppress old Europe. The narrow questions of nationality and boundary occupy you much less than the true merits of the man. How long will it be before we dare to follow your example? before we will elect as one of our colleagues a man who first saw the light in another country? M. Sequard himself, is he not an instance of what I have said? He was born in the Island of Mauritius, in an English colony; he is not a Frenchman, and although educated in Pâris, and speaking the language like one of us; although acknowledged to be possessed of eminent talent; yet he has been unable to attain any official position, only because he was a foreigner."

Who will dispute the propriety of this action on the part of the Board of Visiters? We are striving to build up a great College in Virginia, not to make fat offices to put our friends in. We look around for the *best* man to fill a professorship, and we take him whoever he is. The republic of science knows no boundary save the universe. Every true disciple is a citizen thereof, without being made to prove his birthright or show his naturalization papers. Mr. Jefferson, in founding our University discarded all of these petty prejudices. By bringing eminent professors from abroad to fill its chairs, he at once placed it upon the highest footing, and thus educated a corps of Virginians who have been able to fill their places.

The spirit which will cavil at this policy, would have torn the epaulettes from Lafayette, and wrested the sword from the brave De Kalb, who fell a martyr in our country's cause on the field of Camden.

Such a principle as this would demand of him who was ambitious of teaching others, first to prove himself to be a *Know Nothing;* a disagreeable duty, which would require the philosophy of ancient Dogberry to execute, with equanimity.

It is with sincere sorrow that we record the death of Dr. WALDO J. BURNETT, who died, of phthisis, at his residence in Pitts street, Boston, on July 1st.

Dr. Burnett was one of the most devoted and successful investigators of physiological science, which this country has yet produced. His researches in the department of structural anatomy, especially, were very extensive and valuable. During the five years in which he suffered from the disease to which he has finally succumbed, his ardent and steadfast enthusiasm never flagged, and he "so gathered up the fragments of his broken health as to make them serve for high and useful purposes, and put to shame the fewer and smaller performances of stronger men." At the time of his premature death, he was engaged upon a translation, with commentaries, of the second volume of the comparative anatomy of Siebold and Stannius, and edited the Zoological Section of the *American Journal of Science and Arts.* Dr. Burnett was a zealous student of German medical literature, and had imbibed from this source a taste for transcendal speculation; a fault, if it was one, which he amply expiated by his constant practical labours in physiological observation. He was the author of numerous papers on different branches of natural science, contained in the *Proceedings of the Academy of Natural Sciences*, the *Memoirs of the American Academy of Science and Arts*, the *Transactions of the Boston Society of Natural History*, and *Silliman's Journal*, and of a prize essay on *The Cell, its Physiology and Pathology*, published in the fifth volume of the *Transactions of the American Medical Association.*

Transparent Cement.—According to Leuher's *Belgique Industrielle*, this may be prepared by dissolving 75 parts of caoutchouc in 60 parts of chloroform, and adding to the solution 15 parts of mastic.

We read in the *Allgemeine Medic. cent. Zeitung*, that the celebrated Professor Skoda has presented the profits of the third edition of his *Treatise on Auscultation and Percussion*, amounting to three thousand florins, to the association for the relief of sick medical students at Vienna. In consequence of this humane and noble action, the work of Dr. Skoda serves not only for the instruction of his pupils, but for their maintenance.

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

ART. I.—*A Hitherto Unobserved Result of Dacryocystitis.* By JOHN H. DIX, M. D., Boston, Massachusetts.

I would call the attention of the Society* to a result of dacryocystitis or inflammation of the lacrymal sac, which is certainly not spoken of by the leading writers upon ophthalmic surgery, and I believe not heretofore described or recognised.

In the early periods of affections of the excretory lacrymal apparatus, characterised by an overflow of tear, or of tear mixed with mucus, and at later periods when there is also occasional tenderness to pressure and slight inflammatory enlargement of the sac easily brought to resolution, and still later, when violent acute inflammation of the sac threatening to result in fistula lacrymalis exists, the patient not unfrequently enquires of the surgeon, whether the disease, if left to itself, would result in anything more than an increase of the same sort of annoyance with which he was then suffering.

To this it has been my habit, in accordance with that of writers,† and practitioners generally to reply, that although any affection of the lacrymal passages, long continued, somewhat increases the liability to other inflammatory diseases of the globe, which might possibly result in a permanent lesion, yet he is not at any time, even in the last stage of acute suppurative inflammation of the sac, in peril of loss or injury of vision from this source alone.

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* Read before the Suffolk District Medical Society, June 1854.

† Travers. Synopsis of Diseases of the Eye, p. 371.
Mackensie. Diseases of the Eye, p. 175.
Lawrence (Hays) On Diseases of the Eye, p. 750.
Middlemore. Diseases of the Eye, vol. ii. p. 678.
Tyrell. Diseases of the Eye, vol. i. p. 514.
Jones' Ophthalmic Medicine and Surgery, (Hays,) p. 436.
Desmarres. Maladies des Yeux, pp. 142, 874.
Petit. Traité des Maladies Chirurgicales, T. i. p. 339.
Stæber. Maladies des Yeux, p. 29.
Rognetta. Traité d'Ophthalmologie, p. 714.
Rosas. Handbuch der Augenheilkunde, B. ii. p. 373.
Zungken. Die Lebre von den Augenkoduekheiten, p. 295.
Ruete. Lehrbuch der Ophthalmologie, p. 349.
Fischer. Klinischer Unterrichten der Augenheilkunde, p. 330.
Himly. Kerankheiten und Missbildungen der Menschlichen Auges. B. i. p. 321.
Benedict. Augenheilkunde, p. 135.

If, however, I am correct in the diagnosis of the cases which follow, it is apparent that this opinion as to the absolute security of an eye, the lachrymal passages of which are subject to inflammation, is incorrect; that suppuration of the lacrymal sac may be the direct and speedy cause of destruction of vision, and possibly of life.

Ordinarily, from acute inflammation, unless it admits of resolution, or unless there is some surgical intervention, the sac opens anteriorly and its contents are discharged through the integuments under the tendon of the orbicularis muscle, and temporarily or permanently a fistula lacrymalis is formed. Sometimes, but unfortunately very rarely, the obstruction below may give way; the discharge taking place through the nasal duct into the nostril, and the disease be for the time or forever removed. Thirdly. The sac may be ruptured laterally, and the pus making its way into the cellular tissue between the sac, the globe, and the conjunctiva, escapes through one or more fistulous openings in the conjunctiva. Of this, I have never seen an example, but it is mentioned by Chelius.‡

To a fourth, and as I believe hitherto unobserved result, I especially desire your attention.

The sac may burst posteriorly, its purulent contents be infiltrated into the orbital cellular tissue; the eyeball everted towards the outer canthus and protruded from the orbit; vision destroyed by the sudden and violent extension of the optic nerve, and cerebral inflammation induced.

In illustration, I present to you the two following as the only yet recorded cases of the kind, and as inexplicable upon any other probable ground than that which I have assumed. I shall relate them in the order in which they fell under my observation; because, in the first was to be seen the result of an event which had long before taken place, giving me a strong but not an entire conviction of the original cause, until the second took place, under my own care. By following the same steps, you can better judge of the correctness of my conclusion.

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‡ Augenheilkunde, B. i, p. 262.

Feb. 24th, 1853. Mrs. N. S. æt. 25, of Woburn, three years ago, began to be troubled occasionally with an overflow of tear, from the right eye, after exposure to wind or fire, or close application, and at the same time or very soon afterwards, with an occasional deposite of matter at the inner canthus.

About two years ago, a swelling commenced in the lids. She believes, but does not positively remember, that previous to this swelling of the lids, there was a dull pain at the inner corner of the eye, but thinks that there was at first no sensible swelling at this place. This swelled, reddened, and slightly painful condition of the lids had continued about twenty-four hours, when suddenly just after she had retired to bed, an intense pain commenced deep in or behind the globe of the eye.

The intensity of the pain increased, and in the morning the lids were excessively swollen and turned out, and the globe of the eye protruded very far from the orbit. Leeches were applied at the inner corner of the eye, and also upon the temples, and on the third day after this, the swollen everted conjunctiva of the lower lid was opened by Dr. Culten, who visited her in consultation with Dr. Drew, of Woburn. Immediately after the incision, although, as I am informed by Dr. Drew, there was but little, if any purulent discharge from the opening, the violent pain was mitigated. Two days after, an abscess formed and opened in the lid above the tendon of the orbicularis muscle. From this time, the globe gradually receded and the swollen lids began to contract. In a few days, she found that the vision of this eye was wholly lost.

She believes that in about six months the eye ball receded to its present position. Now, the globe is not at all projected, but is considebly everted. There is no vision, and total insensibility to light.

Injecting the sac through the lower horizontal canal, the water returns through the upper one. Pressing upon the punctum of the upper lid and injecting through the lower one, the sac does not become sensibly distended, but a decided pain is caused. There is of late some increase in the discharge from the corner, both of tears and of mucus. I advised and inserted a style.

March 2nd, 1854. After the introduction of the style, various means, as repeated vesications, strychnia, &c. &c., were adopted and persevered in, with the hope of exciting the retina and optic nerve, but without any success. The style is retained in the duct, there being still some, though much less overflow of tear, than formerly, and the secretion of mucus very much diminished. There has been no renewal of inflammation.

The only circumstance in this case creating a doubt as to the cause of the projection and amaurotic blindness, was the uncertainty of the patient whether the symptoms of inflammation in the lids and globe were preceded by any such symptoms in the lacrymal sac. But in the first place, the extreme pain very soon after endured, may have caused the remembrance of her first suffering to be comparatively indistinct, and in the second place it does sometimes, though very seldom, happen that in actual inflammation of the sac, the erysipelatous-looking inflammation in the lids is the first symptom that compels serious attention.

The fact that the superficial discharge did not take place where the opening of the sac ordinarily does, I conceive to be not at all incompatible with the supposed course of events, for a discharge of pus having taken place from the sac into the orbit, would find above, a readier exit than below the tendon, where the anterior wall of the sac and the integuments, offer a greater resistance than the integuments alone.

Aside from these considerations, however, you will find in the prominent features of the above case, the catarrhal inflammation of the lacrymal passages preceding and following the sudden and violent increase of pain, and the projection and evertion of the globe, a convincing analogy to the following.

February 3rd, 1854. Mrs. C., of Boston, æt. 26, a year ago had a sudden swelling at the inner corner of the right eye, accompanied by severe pain. In about twelve hours, however, both swelling and pain subsided.

Ever since, there has been, from exposure to wind out of doors, and also occasionally when not exposed, an overflow of tear from that eye; the discharge of tear during the present winter having been accompanied by yellowish matter.

Yesterday, swelling and pain in the same region, commenced.—The sac apparently was not much enlarged, but severe pain was referred to its location, and the lids closed from the erysipelatous-looking fullness which accompanies suppuration of the sac. A small poultice at the canthus and opiate vapour for inhalation through the right nostril were directed.

February 4th. The pain less severe, continues as before.

February 5th. The pain much increased, and extending back into the head and into the whole globe of the eye. The swelling of the lids also at first seems greater, but by raising the edge just enough to see the cornea, it is evident that the globe projected from the orbit. There was also chemosis of the conjunctiva over the lower side of the cornea, and a divergent strabismus of the globe.

I made, with an ordinary lancet, a free opening into the sac, from which flowed not more than three or four drops of pus. Three leeches were directed to the right temple, and were followed by some relief of the pain.

February 6th. The projection of the globe still increases, so that between the swollen and slightly everted lids, the lower side of the cornea and much of the chemosed conjunctiva below it were visible. The pain was intolerable, and some indication of cerebral disturbance. In the mean time there had been no discharge from the large opening which I made into the sac the morning before.

On the evening of the same day I saw her again, with the intention of opening very deeply and extensively into the orbit for the evacuation of pus, which I presumed it to contain. With this view, Dr. John Head, of the U. S. A., did me the favor to accompany me. Three hours before we arrived, Mrs. C. had been suddenly relieved of the pain by a copious gush, into the right nostril, of matter of an excessively offensive odour.

The pain steadily abated, the projection and distortion of the globe diminished, and the following day I could raise the upper lid sufficiently to determine that the vision of the eye was safe, although on account of its mal-position she saw with both eyes, double.

Mrs. C. was seen during this time by Dr. Channing, under whose care she was recovering from a recent parturition, and also by Dr. C. D. Homans, and Messrs. Morong and Laincolu. In about ten days, the projection of the globe which, on the day after the evacuation through the nostril, I found by measurement to be one-third of an inch, had quite receded, and with it the external strabismus and double vision and the conjunctival chemosis passed away.

Mrs. C., not being out of doors for several weeks, found somewhat less inconvenience from the overflow of the tear and mucus than for a short time before the acute attack; but on March 14th, five weeks after this last attack, I was again called, and found her suffering, but not severely, with pain at the canthus of the same eye, the sac being very little enlarged, but excessively tender on pressure.

At the conclusion of my first attendance, I explained to her what I expected had taken place, and that to prevent the recurrence of the same or worse results, it would be expedient at the first threatening of inflammation at the inner canthus to open the sac freely, and obliterate it or insert a style.

The patient being etherised, a style was inserted with immediate relief of the pain, and in a few days, entire subsidence of the swelling.

I did not urge upon her the insertion of the style at an earlier period, because complete recovery from the complaint sometimes follows a spontaneous evacuation downwards of the sac, through the duct, and also because she feared that an operation might affect the infant she was nursing. The appearance of this eye is now perfectly natural, and vision as good as ever.

That from the same cause, the ulterior effect upon vision was so different is very clearly accounted for by the duration of the cause in the two cases.

In the first case, from the earliest projection of the globe to its relief by the evacuation of pus from the orbit, there elapsed five days; in the second, thirty-six hours. Probably, also, from the permanent eversion of the eye, in the first case, it was further projected than the eye of the second.

I have assumed, as most in accordance with the symptoms, that in these cases, the first occasion of the projection and eversion of the globe was the effusion from the sac, of pus, and its infiltration into the loose cellular tissue of the orbit; not overlooking the possibility, that without any such effusion, inflammation of the cellular tissue might arise from mere contiguity to the inflamed sac. Whether, however, it was from one or the other, or both of these conditions combined, is not material to the important conclusion which I conceive to be plainly established by these cases, viz: that simple acute inflammation of the lacrymal sac may result ultimately in suppurative inflammation within the orbit, destruction of vision and death.

With regard to the treatment in such cases, aside from the ordinary antiphlogistic measures tending to lessen the amount of inflammation;

and the inhalation of warm vapours through the nostril, by which, I am confident from frequent experience that the chance of a downward exit of the pus through the duct is augmented, relief can be expected only from a free opening into the orbit. This opening should be very large, and deep enough to pass quite through the posterior wall of the lacrymal sac, and if a catarrhal, or as some writers choose to call it, blenorrheal condition of the lacrymal passages has pre-existed, a style or other means of permanent opening of the duct should be resorted to, before the external opening has closed.

Moreover, I believe that in all acute inflammations of the sac, as soon as there is reason to think that pus has begun to accumulate and before it has pointed, the sac should be opened in anticipation not only of this very serious result, but of other annoying consequences, such as an excessively large or irregular opening through the integuments, or the loss of a portion of the skin by sloughing.§

That this result of dacryocystitis has no place in elaborate treatises, professing an encyclopœdic discussion of diseases of the eye, nor in the periodical records of surgery, would be very surprising, but for two considerations.

At present, ophthalmic as well as other medical literature is chiefly of European‖ origin, and it may be presumed that in the variable climate of our eastern seaboard, where, probably, catarrhal diseases prevail more than anywhere else, and catarrh of the lacrymal passages is certainly very frequent, exceptional cases are more likely to be met with.

And if, in a case of this sort, the projection of the globe has taken place before the examination of the surgeon, I conceive that the diagnosis could hardly be other than suppurative inflammation of the cellular tissue of the orbit, unless accident or previous knowledge of the patient pointed to the condition of the lacrymal passages.

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§ For these last reasons, Doctor Middlemore advises a very early opening. Vol. ii, p. 699.

‖ I do not ignore the very valuable contributions of American writers—Hays, Wallace and others—but speak of the mass of our literature.

ART. II.—*On Modern Hippocratism.* By JEAN BRUNO CAYOL, Ex-Professor of Clinical Medicine of the Faculty of Paris, Chevalier of the Legion of Honour, Member of many Learned Societies, &c. &c.—*La Revue Médicale.*

I have defined disease: *an adventitious and abnormal function of the organism.*

This definition is not an isolated thought or an arbitrary conception. It is the corollary and legitimate consequence of a number of propositions or aphorisms, which are logically connected. It is necessary, therefore, in order to explain and demonstrate it, that I should commence by laying down the fundamental principles of vitalism, as I have understood and classified them, under the title of *Modern Hippocratism.* I will afterwards demonstrate that each of these propositions, not excepting my definition of disease, are deducible from truths which are taught by common sense.

This exposition will present, as far, at least, as my limited space will permit, an imperfect, but faithful sketch of the traditional Hippocratic doctrine, renewed, to a certain extent, by propositions expansive enough to embrace, not only the entire domain of ancient medicine, but all the later facts of anatomy, physics, chemistry, microscopy, and, in a word, by all the legitimate acquisitions of modern science.

When I have explained this doctrine, its philosophical principles, and its practical applications, it will be easy to appreciate the value of the singular reproaches which Dr. Tessier has recently urged against it,* in declaring that it affirms *a vague and indeterminate vitalism, of a purely rationalist and philosophical character, and, what is worse, that its character is even pagan.*

APHORISMS OF MODERN HIPPOCRATISM.

I. Every living organised body is endowed, during a certain period, with the faculty of providing for its own preservation, of opposing an active resistance to destructive agents, and of incessantly repairing its losses.

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* This article is a response to a series of letters by Dr. Tessier, on *Medical Education*, published in the *Univers* newspaper.

II. This faculty, inherent in and peculiar to living organised bodies, is the result of a particular force which presides over all the phenomena of life, and which we consequently designate as the *vital force.* But, as this force only manifests itself by the action of organs, whenever we speak of it in its acts, we term it the *organism.*

III. Life, when considered in its relations to the external world, consists only in an incessant struggle or reaction of the organism against the general laws of gravitation, of affinity, of the propagation of caloric, of electricity, of magnetism, and perhaps of other unknown agents besides.

IV. Independently of this *normal* struggle or reaction of the organism, which does not disturb the harmony of the functions, which, on the contrary, is their natural end and result, *adventitious or abnormal* reactions of the organism are excited by all disturbing and destructive agents, that is, by all the causes of disease.

V. Every disease, then, is an adventitious, abnormal, or pathological reaction of the organism against some disturbing cause.

VI. According to common sense, and according to the etymology of the word, a *reaction* is an *excited action.* Moreover, any action or act of the organism, whether excited or spontaneous, which has a tendency or an aim, is by this very fact a *function.* It is impossible to characterize it by any other name.

VII. Every disease, therefore, is an *adventitious or abnormal function of the organism,* whose object is to eliminate or assimilate the injurious thing, the foreign body, the heterogeneous principle, or the morbific cause, to unite what has accidentally been divided, to repair whatever is disordered, whether these disorders arise from the presence of some heterogeneous principle, or from efforts of elimination and assimilation themselves.

VIII. The living organized body presents, then, to medical observation, two orders of functions: the natural or physiological functions, and the accidental or pathological functions. Both orders tend by different paths to the same end, which is the preservation of the individual.

IX. These two orders of functions depend on one and the same law; the law of life, expressed by the term *vital force,* when we speak of physiological functions, and by the term *vis medicatrix,* when we speak of the pathological functions which constitute disease.

X. Accidental or pathological reaction may be either general or local. The agents of general reaction are the heart and nervous centres; local reaction has for its agents the nerves and vessels of the affected part.

XI. Pathological reaction, whether general or local, varies in its processes and in its intensity according to a multitude of circumstances, which are relative; first, to the nature of the morbific cause; second, to individual peculiarities; third, to external influences.

XII. When the reaction is *acute*, that is to say prompt, energetic, and accompanied by exaltation of the animal heat and of the sensibility, it takes the name of *fever* or of *inflammation*, according as it is general or local.

XIII. Fever, then, is a general reaction of the organism, with exaltation of the animal heat and of the sensibility.

XIV. Inflammation is a local reaction of the organism, with exaltation of the animal heat and of the sensibility.

XV. Inflammation is a *local fever*, as fever is a *general inflammation*.

XVI. These terms, fever and inflammation, signify, then, in ultimate analysis, the same thing. They express neither the mode nor the nature of the reaction, but only its extent, its degree of intensity.

XVII. Every local reaction can excite consecutively a reaction of the heart and great vessels; it then becomes general. So any local inflammation, whether external or internal, may become the cause of fever, and will become so with the greater facility in proportion as the affected part possesses sensibility, irritability, and active sympathy with the heart and nervous centres.

XVIII. There are, therefore, primarily local acute diseases or fevers, which are called in the ordinary language of pathology *symptomatic fevers.*

XIX. General reaction or *fever* is also excited directly by different causes, which we will divide into two classes, for the sake of clearness of exposition, without attaching any importance to this division. One class appear to act primarily on the living solids: these are moral affections, physical commotions, atmospheric vicissitudes, electrical conditions of the atmosphere, etc. The other class apparently acts primarily on the liquids; it embraces all deleterious or infectious agents which enter the economy by absorption through the tegumentary tissues, the skin and the mucous membranes, and thus excite the heart and nervous centres. Such are the different kinds of virus, poisons, and agents of contagion, nosocomial effluvia, putrid exhalations, marsh miasmata, and the unknown causes of certain epidemics.

XX. There are, then, primarily acute diseases or fevers, that is to say, primary or essential fevers.

XXI. Fever is not an *entity*, as might be inferred from the improper language of certain systems. It is not an entity, but an act or action of the organism ; it is an excited action, that is to say, a *reaction ;* this reaction has a tendency, an end ; it is therefore a *function*, an excited pathological function, necessitated by that primordial law of the organism which we express by the terms *vital force* or *vis medicatrix*, which in ultimate analysis signify the same thing, since they only express one and the same law, from which all physiological phenomena and all pathological phenomena are naturally derived.

XXII. We should not, therefore, enquire what is the *seat* of the fever, but what its agents are, what its instruments or organs? The response to this question has been already given, (Aphor. X.)

XXIII. Disease being in its nature and essence a vital act, it should not be confounded, as it generally has been hitherto, with the lesions or alterations of organs, which are only its eventual results or consequences.

XXIV. All the physical or material alterations of organs which pathological anatomy comprises in its vast domain, indurations, softenings, hypertrophies, atrophies, suppurations, effusions, degenerations of all sorts, tubercle, cancer, melanosis, cirrhosis, steatoma, atheroma, etc., are but the products of pathological exhalations, secretions, or other abnormal functions, which have their type in the natural functions.

Thus, to reduce the theory of medicine to the logical coördination of the facts which result from observation of the living and reacting man, is equivalent to introducing a clear, precise and vigorous language into medical science ; to liberating us from the deplorable necessity of founding the whole science of disease on words which no one has been able to define, For, if there is one truth in which every one at the present day agrees, and which is allowed by the most antagonistic schools, it is that after centuries of study, research and discovery, it has always been impossible to define, in a philosophical and practical manner, disease in general, and also fever and inflammation.

These three definitions, without which any medical doctrine is an edifice without foundation, have always been impossible, as long as no distinction was drawn between disease, a vital act, and the organic degenerations and alterations which are only its results or consequences.

When Stoll said, with profound truth, that fever was but the effort of life to repel death, *molimen vitæ conantis mortem depellere,* that great physician was evidently on the track of the vitalist definitions which were then wanting in science. In order to reach these, he would have only had to generalize his proposition by a philosophical formula embracing all pathology.

But the time had not arrived; science was not yet ripe for this change. Pathological anatomy was in a nascent state; it was requisite that it should extend, develope, and teach us all it could. It was not until our time that it was possible to circumscribe its domain and assign it its true position, *after* the vital actions which constitute diseases. (Aphor. XXIV.)

In *Modern Hippocratism* will be found, for the first time, disease in general, fever, and inflammation, considered as essentially vital actions, and defined according to this character. This is the culminating point and the principal merit of this Doctrine.

To complete the demonstration I have promised, I must be permitted to commentate and develope, not each of the twenty-four aphorisms, for this would require a medical treatise, but such of them as will best elucidate the special object of this article.

The first three aphorisms present LIFE, or the VITAL FORCE, as the initial fact, the principal fact of medical observation. Remark, in the the first place, that this is not life represented by an arbitrary hypothesis, or by an ontological conception, like the *Archeus* of Van Helmont, the *electro-vital fluid,* the *vital principle,* the *physiological imponderable,* etc., or even by a secondary fact, like the Broussaisian *irritability.* No, not at all; it is life itself, life as it is, as it manifests itself to us, with its characteristics and attributes which are accessible to the most vulgar observation. *Every one* knows, in fact, that living bodies differ essentially from inorganic matter. Every one *feels* instinctively that there is in us a resisting force, and that the resistance it offers is *active,* and not passive and inert, like that of the stone to the hammer. These truths of common sense alone suffice to demonstrate and characterize life as it is understood by *Modern Hippocratism.*

Life is a law of the Creator, as inexplicable as all the other laws of the universe. Life is the law of organized beings, as attraction is the law of inorganic matter.

Some years ago, a distinguished physician, a man of science and of talent, but a warm partizan of the materialist and *iatro-chemical doctrines*,† attacked, from his point of view, the vitalist doctrines of the *Revue Médicale*. He dwelt chiefly on my comparison of vital force and attraction, and this is what I replied. I will reproduce this polemic, as a commentary and development of my proposition.

"Yes, we have compared vital force to the law of attraction. Yes, we did say long since, and we still maintain, that vital force is to the organized body what attraction is to the inorganic body. Yes, we have said, and we think so still, that in proclaiming this primordial law of the organization, Hippocrates did for physiology what Newton subsequently did for natural philosophy."

"Attraction, you say, is not an hypothesis: it is the expression of a general fact, that is to say, a principle."

Indubitably. But this is quite as true of the vital force, as we understand and describe it.

"Attraction, you further affirm, is the most general and best established principle in the human sciences."

We admit this, but we pretend also that the *vital force*, or life, if you like it better, is the most general and best established fact which can be found in physiological science. We cannot divine what you can say against this proposition.

Let us pursue the comparison that you have yourself provoked, between *attraction* and *vital force*. In order that there may be no equivocation possible, we will continue to take your own language in regard to *attraction*, and to apply it phrase by phrase to *vital force*.

"All the molecules of matter attract each other: this is one of the most incontestable of facts: the action by which matter is drawn together is called *attraction*. This term does not explain the fact, it expresses it."

Every living organized body opposes an active and synergic resistance to destructive agents. This is a fact as evident and incontestable as that of attraction. Active resistance or reaction is the most essential characteristic of life, and is called by the same name. The term *life*, or *vital force*, does not explain the fact, it expresses it."

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† The sneer at the *Greco-medical* nomenclature sufficiently indicates M. Piorry as the distinguished gentleman whom M. Cayol is about to assail.—Trans.

Attraction is a force which is known, measured, calculated; it is a power which acts upon the minutest molecules as upon the most imposing sidereal masses. It is one of the most essential attributes of matter, a property inseparable from it, indestructible, *eternal as itself.* . . . ."

Except the *eternity of matter,* which we do not admit, and which we will not discuss, as it has nothing to do with the subject, this is incontestable, and literally applicable to the *vital force.* Vital force, say we in our turn, is a force that is *known,* quite as well known, at least, as attraction. It can be *measured* and *calculated* like attraction, not by mathematical instruments, but by physiological and pathological observation; it is a power not less *real* than attraction, it acts upon the *minutest molecules of organized matter* as upon the largest organic apparatus. It is the most essential attribute of the organization. The only point of difference which we perceive relates to *duration,* and even here, to push the comparison, we may say that if life has only a limited duration in the individual, it is perpetuated in the species by generation.

You then set forth with a triumphant air, the phenomena of germination and incubation. You think that you deduce from them an irresistible argument against *vital force.* Ah! permit me to say, that if you were not blinded by materialist prejudices, and if you had reflected more seriously on those marvelous processes of germination and incubation, you would have found in them, as we have done, the most beautiful demonstration of that *vital force,* which you deny because you will not comprehend it. Ah, what! when you have placed a seed in the earth, and have placed an egg in a temperature favourable for incubation, if a plant is organized on the one hand, and an animal on the other, can you discover in these admirable evolutions nothing more than the results of chemical combinations caused by a certain degree of heat and moisture! Is it not evident that the heat and moisture are only the conditions, and not the cause producing these phenomena? Do you not perceive an abyss between the most complex chemical combination and the simplest animal or even vegetable organization? In the seed and in the egg, as in all of our organs, chemical processes take place to a certain extent, no doubt, but they are subordinate to *life,* and are always more or less modified by its sovereign power.

The most essential part of the seed, and of the egg, too, is the germ, which apparently is not a chemical product! We see this germ enlarge, and develope itself by successive evolutions, organizing itself, and nourishing itself by assimilation, presenting, in a word, the essential attributes of life. We conclude that *life* or the *vital force* exists in the germ, and that it is even preëxistent to the organization, of which it is the moving power, the *nisus formatrix,* as the ancients termed it.

After detailing a series of chemical experiments, the results of which do not furnish you with very weighty arguments, you add: "Now, can we assert that it is not the peculiar arrangement of matter in vegetables which produces these admirable and mysterious phenomena, the progress of which we cannot follow, and the causes of which we cannot determine?"

And the law of *concensus* and synergy, which conjoins all of our organs, and coördinates them with such perfect harmony for the preservation of the living individual whether healthy or sick, how can you deduce this from *your peculiar arrangement of matter?* Observe, that in the mechanism of our organization, considered as a whole and in its innumerable details, everything speaks of a most sublime intelligence, an intelligence other than our own; for immense as is the pride of man, he has never pretended to preside over those infinite combinations of inculatory and oscillatory movements which are carried on in the depths of his being, and which make him to live, without consciousness of them, even. What, then, is that intelligence, foreign and so superior to that of man, if it is not the intelligence of God, always present in the universe. Suppose whatever *arrangements* of matter you choose, interpose electric currents and all the imponderables you can discover, you can never elicit intelligence; you can never explain on material doctrines that *internal Providence of the organism,* that Broussais even, was forced to acknowledge and teach, though he shrank from its legitimate consequences.

And now, having defended vitalism, as I comprehend it, from the attacks of *materialism,* must I defend it against the attacks of the *spiritualism* of Dr. Tessier? Ah well, be it so!

If I have understood the reproaches which he has addressed to *Modern Hippocratism,* a doctrine which bows with respect before the Creator's laws, as St. Paul bowed before the majesty of the loftiest mysteries, and which exclaims with that holy doctor, *O altitudo!* is not spiritual enough for his taste; it is even, according to him, a *pagan* doctrine!

Such an imputation is hardly serious. I might leave it without commentary to the good sense of my readers. But I wish to profit by the occasion which is offered me to declare that if it was demonstrated to me by a competent authority that any proposition of *Modern Hippocratism* whatever was opposed to Catholic truth, I would suppress it unhesitatingly as false and erroneous, even though its suppression involved the ruin of the entire doctrine.

I know perfectly well what is necessary to satify Dr. Tessier; but I feel no desire to follow in his path, which I regard as dangerous and false. He wishes that instead of accepting *vital force* as a law of creation, we should seek the essence and nature of this law, that is to say, that we should leave the domain of medical observation to enter on that of theology.

There, many opinions present themselves. The one most authorized in the Church appears to be that of St. Thomas Aquinas, which considers vital force as one of the attributes of the thinking immaterial soul, whose substantial union with the body, constitutes human personality: *Una tantum est anima intellectiva, quæ vegitativæ et sensitivæ et intellectivæ officiis fungitur.*

This *extra-medical*, or *supra-medical* doctrine, if I may be excused the expression, is perfectly reconcilable with *Modern* Hippocratism, and if it was necessary to inscribe it at the head of my aphorisms, I could do so without changing one *iota* of my vitalist formulæ.

Why do you not place it there, do you say? I refrain from doing so because it would subserve no useful purpose, as far as Medical Science is concerned, and because I do not wish to introduce a theological doctrine into Medical Philosophy. In this amalgamation of principles, deduced from two sciences which are based on truths of different orders, there is no *contradiction*. There can be none between two doctrines of equal truth, since truths, of whatever order they may be, are derived from the same origin, which is God; there is not, I say, any contradiction in this amalgamation, but there is *incoherence* and *impropriety*.

Cast your eyes over the history of medicine, and trace its vicissitudes during the course of ages, and you will find that it has never gained anything, that, on the contrary, it has always lost, where it has left its legitimate field to trespass on the domain of psychology, theology, or metaphysics. Even in our day, see what is going on at Montpelier, where endless and fruitless discussions on the *duality of human dynamism* are carried on, and honorable physicians are reciprocally demolishing each other with texts of Scripture or of the fathers of the Church, which each one interprets in his own fashion, to sustain propositions which have no applicability to medical science.

May God ever preserve us from these unhappy strifes, where religion gains nothing any more than science.

Listen to what was written, twenty-five years ago, by an author whose catholicism will not be doubted, and who has a just claim to be cited as one of the profoundest and most judicious thinkers of our epoch.

> "The sciences, says the illustrious Frederick Bérard, are not subjected one to the other. Each of them should be based on the facts proper to it, since, in fact, a science is nothing more than the systematic collection of the facts belonging to it. This law, protecting the respective rights of sciences, has been violated at almost every period, and it is to this violation that the great part of the errors which have arrested their progress must be attributed."
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> "Physical sciences should be based on facts of the *same order.* As long as they were studied according to mystical theology, ontology, and metaphysics, they did not even exist."—*Doct. Méd. de l'Ecole de Montpelier.*—1 vol. in 8, Paris, 1819, p. 209.

Hear, again, the words of Frederick Hoffman, that great luminary of medicine, at the close of the seventeenth century. A man of vast science and of fervent piety, he desired that the physician should always be a Christian: "*Medicus sit Christianus;*" but he never said: *medicina sit Christiana;* because he understood Medicine too well to wish to divert it from its true principles. Oh, yes, the physician has need in the exercise of his delicate and noble vocation, of being guided and sustained by the principles of the purest and most elevated morality. Yes, it is most true that this perfect morality is only found in the Christian religion, properly understood and faithfully practiced. Let us make, then, as best we can, by our precepts and example, *Christian physicians,* according to the wish of our illustrious predecessor; this will be more meritorious and more useful than to make what Dr. Tessier understands by *Christian medicine.*

I will not pursue these considerations. I will return to my definition of disease, contained in the seventh aphorism.

This definition is only the rejuvenated, purified, and enlarged expression of a thought as old as medicine itself. I speak of that *vis me-*

dicatrix naturæ, which has excited the admiration of the noblest geniuses, which HIPPOCRATES first recognized, and celebrated in so many pages of his immortal writings. Nature, he exclaims, is the true physician : *natura morborum medicatrix.* The natures of animals, he adds, without being instructed, open for themselves salutary ways, and operate all that is necessary without possessing intelligence.‡ Finally, he continues, nature is all-sufficient. · · · We must consider in man, not only the receptacles, or the solids, and the contents, or the liquids, but above all the active powers, or what causes movement—Τὰ ορμῶητα. · We must obey the guidance of this nature, and if she is oppressed we must succor her. Her efforts are essential in disease; if she rebels, all that the physician can do will be useless. Medical art, pursues Hippocrates, delivers the patient from pain and restores health by removing what produced disease; but nature knows how to do this herself. She is foreseeing and wise, like a tender and just mother.§

What grand truths and useful lessons in these sentences of the father of medicine! eternal truths, independent of all systems, which Galen, Aretæus, Stahl, Sydenham, Boerhaave, Stoll, Baglivi, Corvisart, Pinel, and the great observers of every age have constantly proclaimed!

Examine from this point of view every disease from the slightest to the gravest, from the simplest puncture to the gravest organic alterations which render the tissues of the viscera irrecognizable, you will find in all a concourse and succession of preservative efforts, differing according to the nature and period of the disease, but always appropriate to the morbific cause or *affection,* and to the disorders which require reparation. Let us adduce some examples :—

A grain of sand gets between the duplicature of the conjunctiva, and affects the eye-ball more or less painfully. Presently the local circulation is accelerated; an increased quantity of blood flows into the conjunctiva or lacrymal gland, and furnish them with materials whence to secrete an abundant secretion of tears and mucus, until finally the foreign body is floated out in these humours.

Is there a foreign body which cannot be eliminated because it is too heavy, too large, too adherent, or situated too deep in the viscera; an adventitious tissue is formed around it like a barrier, and it is isolated completely and prevented from doing harm. We may cite, for example, balls which cannot be extracted by means of art, and which sojourn for long years in the limbs, and even in the splanchnic cavities, without causing either pain or functional disorder; the cyst which envelopes the fœtus in extra-uterine pregnancy; the admirable process of nature for the cure of apoplexy from cerebral hæmorrhage, etc.

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‡ EPID. VI, *Sect.* 5.

§ DE ARTE, et de Vict. rat. lib. I.

Do you wish for a remarkable illustration taken from quite a different order of diseases? Then observe what takes place when the course of the fœcal matters is interrupted by the strangulation of an hernia. What violent and energetic reaction of the organism against the physical power which oppresses it! All the organic apparatus combine their efforts, and seem to league together to repel, each according to its means, the common enemy. The upper portion of the intestinal canal, distended and menaced with rupture by the accumulated fœcal matters, contracts energetically on the masses, and, assisted by the diaphragm and abdominal muscles, it expels them by the mouth; the rest of the digestive apparatus participates in this convulsive agitation, which tends to liberate the incarcerated bowel, and to draw it back into the abdomen. The heart redoubles its contractions to accelerate the circulation of the blood, and to send to the oppressed parts an increased quantity of this vivifying fluid.

Observe, again, what happens in inflammations of serous membranes, where the product of pathological secretion becomes itself a foreign body, and is the more deleterious because it cannot be eliminated, being enclosed in a closed sac. It cannot be eliminated, and therefore it must be assimilated. By a marvelous combination of vital acts, this sero-purulent liquid is gradually modified in its composition, and is transformed into a membraniform tissue, which insensibly assumes a cellular, fibrous, or fibro-cartilaginous structure, and becomes naturalized in the organism.

Shall I speak of fevers, and especially of eruptive fevers, where we may follow the morbific cause, step by step, as it were, from the moment of its introduction into the living body until its elimination by the skin. What disorder in all the functions! acceleration of circulation and respiration, prostration, somnolence, delirium, convulsions, vomiting, involuntary dejections, etc. All of these disorders, frightful as they are sometimes, disappear as through enchantment, and the natural order recurs, as the eruption is regularly developed on the skin.

And in those grave continued fevers, which affect essentially the nervous centres, and which are called malignant, adynamic, ataxic, typhus, etc., can you not perceive phenomena of crises presenting the closest analogy with those of fevers.

These examples, which could be multiplied by thousands, and which daily present themselves to the observation of the practitioner, prove to him who can reflect, a medical truth of the highest order, which has struck the greatest physicians of every age, which no modern discovery has undermined, and which is in perfect agreement with the best established notions of physiology; which is, that the living body reacts against all disturbing or destructive causes; that this active resistance or reaction is not limited to the elimination or assimilation of the material cause of trouble, but that it provides also for the reparation of disorders; and lastly, that this succession of vital acts which we call *pathological reaction* is the most general characteristic of disease.

It will be observed that in the definition of disease (Aphor. VII.), I have not spoken of the *affection,* without which, nevertheless, disease cannot exist. Reaction being an excited action, cannot exist without an exciting cause; this exciting cause is the *affection*, that is to say, whatever can affect the living organism. The *affection*, then, is necessary to constitute disease, but *reaction* alone characterizes it, and this characteristic suffices for a complete definition of disease, since the reaction necessarily presupposes the affection.

Although reaction is the most essential characteristic of disease, it is not to be understood that it predominates over the affection. If in some diseases this predominance is manifest, in others the reverse obtains.

In acute diseases or fevers, reaction is always predominant and generally excessive. This is why the treatment of these diseases, especially in their early stages, is generally based on diet and what is called the antiphlogistic treatment, comprising blood-letting, evacuants, sedatives, etc.

In chronic diseases, on the contrary, the *affection* is in general predominant. The reaction is almost always feeble, insufficient, in some cases scarcely apparent, but never absent. For, if reaction presupposes affection, as I have already said, it is quite as certain that the affection cannot exist without exciting reaction, according to the law of life, which is absolute and sovereign in the organism.

According to the relative predominance of one or the other of these two pathological elements, diseases may be divided into two classes: *reactive* or acute diseases, and *affective* or chronic diseases.

Although this article is already long, I will not conclude without calling attention to the twenty-third and twenty-fourth aphorisms, were it only to elucidate functional disease, (*la maladie function,*) and organic disease, (*la maladie lésion,*) which Dr. Tessier stigmatizes as *two errors.* He should have said, *two heresies,* since he pretends to argue for Christian, thomist, and scholastic philosophy.

It will have been already seen, and it is proved by these two aphorisms, that *Modern Hippocratism* is very innocent of these two heresies.

I believe that I have exonerated it, as far as functional disease is concerned.

As to lesional disease, it does not recognize it, since one of its fundamental dogmas teach, that disease, a vital act, shall not be confounded with the lesions or organic alterations which are only its results and consequences.

All the organic lesions and alterations, suppurations, effusions, tubercles and other accidental tissues, are only, I cannot repeat it too often, are only the products of abnormal exhalations, secretions, or other pathological functions, having their type in the physiological functions.

These products of pathological functions are always more or less deleterious heterogeneous matters, which *affect* the organism in different degrees. They, therefore, excite necessarily a new process of elimination or assimilation, which protracts the disease, or which is itself a new disease, a consequence or result of the first.

It is thus that the majority of chronic diseases are the remains of acute diseases.

Ampler developments would compel me to abandon generalities, and enter into pathological details incompatible with the limits of this article. I believe that I have already said enough to induce Dr. Tessier and the readers of his letters to the *Univers,* to reconsider the judgment which that physician has ventured to express in regard to my definition of disease, when ignorant of its meaning and bearing. I believe that I have demonstrated that this definition, far from being *opposed to common sense,* is only, when rightly comprehended, the expression of a truth taught by common sense, and that, instead of *destroying science,* it places the science of disease on its true basis. It is a practical and philosophical definition, embracing and coördinating all the facts of pathology and therapeutics, and is established by a vigorous deduction from principles which appear to me incontestable.

If my antagonists will point me to a doctrine more fruitful in physiological truth than that which I have imperfectly developed, I will hasten to investigate it. But if, after a serious and conscientious examination of *Modern Hippocratism*, they find that it responds to the wants of modern science, and opens a new path of progress, let them endorse this doctrine and sustain it by their learning and talent.

"Si quid novistis rectius istis, candidus imperte. Si non, his utere mecum."

ART. III.—*Views of Delirium Tremens, with Especial Reference to Treatment in Private Practice.* By JOHN HERBERT CLAIBORNE, A. M., M. D., Petersburg, Virginia.

The views usually entertained of the nature of delirium tremens, and the pathology inculcated by most medical authors upon this subject, have a tendency to induce the general practitioner to adopt a course of treatment that we believe to be very erroneous if pursued in the majority of cases occurring in private practice, and one that cannot fail often to endanger the life of the patient. The error into which many teachers of medicine have fallen when treating of this subject, has originated, perhaps, in the fact that they have chiefly derived their experience, at least in this disease, from the wards of the hospitals of the large cities.

We are aware of the advantages afforded by hospital practice for the extended observation of disease, and for the accurate accounting of the action of remedies, but at the same time, we do not think that the practitioner will find himself sustained by the results in administering, without some modification in dose or concentration, the same class of remedies in private practice, that he was in the habit of exhibiting in the wards. This is a lesson that the young physician soon learns on his return from the clinics, and not sooner in reference to any class of therapeutical agents than the class of stimulants.

The patients usually presented for treatment in hospital practice display few evidences of plethora. The most of them can scarcely originate an active phlogism. They are generally of the order fashionably termed *adynamia.* Often laboring under accumulated causes of both moral and physical depression sufficient to annihilate every atom of nerve power, and to stagnate the fluid of life in its very sources; they need stimulation, need repletion. In private practice, however, an opposite condition usually exists, and an opposite class of remedies is oftener indicated. Here, we find more frequently a rich, stimulating blood, which under febrile irritation is driven forward, choking and fretting the organisms, firing the brain, phrensying the heart; and to give further stimulation is but adding fuel to a flame that already threatens to consume the structures. It is true that exceptions exist in some cases, and in the character of certain epidemics; but we think we have stated the rule correctly.

In no disease, we believe, will the rule hold better, as a generality, than in the one under consideration. In referring to a note book kept for several years past, we cannot find a single case of delirium tremens, marked by the symptoms of adynamia; nor can we recur to one in our memory. We do not find any in which the stimulating treatment seemed to be indicated. They have all been of the phlogistic order; full of blood, full of nerve power; many exhibiting every form and feature of active madness.

We are aware that this experience is widely discordant with the greatly more extended observation of a popular teacher and distinguished medical writer of the day,* who finds in *all* cases of delirium tremens a *diminution* of the *excitation* necessary for the support of the brain in its healthy functions, who recognizes it *entirely* as a *state* of *depression* and *debility,* and who deduces therefrom the rational treatment to "*stimulate* the brain up to the point essential to its correct action." This gentleman, however, acknowledges, apparently to us with some inconsistency, that this disease, *one* of *debility* and *depression,* may coexist with the complication of *excitement* and *power,* induced by the immediate stimulus of alcohol, or by inflammation of the brain. This is a complication that we cannot appreciate, if the disease in question be one of pure nervous debility or depression. It is one, however, which has very frequently occurred in the course of our practice, and which we have usually explained on a different hypothesis in reference to the nature of the primary disease.

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* See Wood's Practice, vol. ii., Art. Delir. Tremens.

But before entering further into the investigation of the subject, it may be best, perhaps, accurately to define the malady that we wish to speak of. We wish to be understood as referring to the *peculiar disease of drunkards*, and known under a variety of titles of English, French and Latin origin and import. We have adopted that of delirium tremens, not because critically unexceptionable, but as the one under which it was first brought prominently before the profession, by Dr. Sutton, and the one least liable to be misunderstood among medical men. So much for the name. Its character we will endeavour to elucidate, by simply transcribing a few cases from our note book. This method, if it fail of being sufficiently comprehensive for a finished essay, will at least record the symptoms and phenomena to which are attached in our own mind the title selected. This, we hope, may prove sufficiently explicit for a paper designed to be entirely practical.

CASE I.—This occurred in the person of a physician, a stranger in the city, to whom we were called July 20th, 12 o'clock M. He is a small, delicately formed man; æt. 26; usually enjoys good health, though occasionally intemperate in his habits. He has been drinking for more than a week very largely every day; has been in his room for a day or two, though he has never ceased to keep up the steam until just now, when his stomach positively refuses to carry any more. He retches and vomits incessantly, bringing up nothing but a little mucus, and occasionally a small quantity of dark coffee-ground material, evidently altered blood. His eyes are red and injected; face purple; skin bathed in profuse perspiration; his tongue whitely furred and tremulous; muscular tremors of whole body; pulse rapid and irritable, but yielding to pressure too readily; his mind wandering, and sometimes totally unconscious, as if going into a state of coma; in intervals of consciousness he is very much alarmed; thinks he is pursued and endeavors to escape by a window. His whole condition calls for urgent and immediate relief.

We ordered his whole abdomen to be covered with strong sinapisms. Ice was applied to his head and furnished him *ad libitum*, and one of the following powders every two hours:

℞. *Hydrag. mit. chlorid. grs. xxx.; Morph. murias, grs. jss.* Ft. pulv. In chart. No. iij., divid.

6 o'clock, P. M.—Has taken only two of the powders, and felt so much better after the second, that his nurse did not administer the

third. His mind is much more composed; his vomiting relieved; but he feels no disposition to sleep, though he has had none for some days past. The medicine had no effect upon his bowels. Ordered an enema of turpentine, and, in case of his being very restless, ⅙th grain of morphine every two hours, until quiet, *not sleep*, is induced.

July 21st, 9 o'clock, A. M.—The patient had several large, black, tarry evacuations during the past night, to his great relief; says he passed a tolerably comfortable night, though he slept none. He took none of the anodyne; feels very weak, but his nerves are steadier. Ordered no medicine, but rich chicken broth.

6 o'clock, P. M.—Still feels quite comfortable, he says, and has dozed a little to-day. Ordered him a cup of tea and milk, and ⅓rd grain of morphine at bed time.

July 22d.—Slept well last night and says he is all right this morning. Desires to be dismissed, and promises he will take no more liquor.

Duration of treatment two days and a-half.

Case II.—November 15th, 10 o'clock, A. M.—Called to see T. J.; æt. 30; small stature; bilious temperament. He has delirium tremens emphatically; trembles from head to foot; is bathed in profuse cold sweat; pulse rapid and feeble; tongue whitely furred; bowels constipated; no appetite, but no nausea. He feels wild and strange about the head; countenance anxious, and appearance alarmed; is extremely restless, and though perfectly conscious, cannot be restrained from walking his room incessantly. He is in the habit of drinking very freely every day, and has by no means left it off, having taken already three drams of brandy this morning.

We ordered his grog to be stopped peremptorily, and one of the following pills to be given every two hours:

℞. *Hydrarg. mit. chl., grs. x.; pulv. camphor, grs. vj., pulv. ipecac. grs. j.; morph. murias, grs. ss.* Ft. mass. In pil. No. iij., divid.

5 o'clock, P. M.—The patient feels more composed, and will lie down now. He has had several attacks of vomiting, however, and labours under the delusion that the apothecary has poisoned him. He is steadier in his movements; had no operation. Ordered a stimulating enema, and lime water and milk. In case of his being restless to-night, to have ¼th grain of morphine, every two hours, until quiet.

November 15th, 9 o'clock, A. M.—Mr. J. had a profuse bilious purging last night, and slept some without any anodyne; feels very weak this morning, but otherwise well. He has no tremors, no delirium, or excitement of pulse. We ordered oyster soup; and in case of great debility under further purging, a little porter. Dismissed. Duration of treatment 24 hours.

CASE III.—August 10th, 9 o'clock, A. M.—J. B., æt. 30; a large muscular man; usually enjoys strong health, and is unaccustomed to drink regularly, but sometimes indulges to excess. He has been on a frolic for several days; has not omitted his stimulation at all, as he drank at least a half tumbler of raw spirits just as we entered the room. His pulse is full, rapid, and bounding; his eyes suffused; face flushed; veins turbid; tongue furred; bowels constipated, and skin moist. His actions are quick, uncertain and tremulous, and he expresses a good deal of alarm at one moment, though at another he will laugh and say he don't know what it is he is afraid of.

He was ordered to be confined in his room with trusty attendants, and to have no more liquor, but to take sulph. magnesia, one ounce, and to have cold applications kept on his head.

12 o'clock, M.—Symptoms aggravated. He is furious in his efforts to escape, and thinks his attendants are conspiring against him. He is comparatively rational while talking to me, and complains of pain in the head, with burning in the stomach, and intense tenderness over the epigastrium. He vomits and retches constantly. We directed a dozen cups to the epigastrium, with free leeching on the temples, and a stimulating enema; lime water and milk, with ice *ad libitum.*

6 o'clock, P. M.—The medicine produced a slight operation, but no action on the liver; his nausea and vomiting are relieved, however, and his delirium is not so violent. His arterial action has been a good deal reduced by the free depletion. His enemy has developed itself to be a large black snake, which he imagines occasionally runs across his bed, and to escape from which he makes some of the most ludicrous attempts. Ordered for the night one of the following pills every three hours:

℞. *Hydrarg. mit. ch., grs. xiij.; ext. colocynth. co., grs. vj.; morph. murias, grs. j.* Ft. pil. No. iij.

August 11th, 9 o'clock, A. M.—Took only two pills during the night, which produced several large, dark operations, giving great relief to his head and stomach, and considerably composing him, though he got no sleep. There are no hallucinations this morning, and but little excitement of his pulse; complete anorexia, however, and some nausea. Ordered no medicine and no food—lime water and milk only.

At night, he took ⅓rd grain of morphine, had a comfortable sleep and had no return of the symptoms of delirium tremens, though considerable gastric irritation called for treatment some days.

These we believe to be fair specimens of the cases of delirium tremens that have come under our observation. The most of cases we have seen, have perhaps more nearly resembled the last one recorded, in the activity and violence of the symptoms. Indeed, we have seen most active depletion requisite to stave off threatened cerebritis; and are confident of having seen one person perish from effusion on the brain, whom we had attended in several previous attacks, but to whom several of his non-professional friends had ministered in his last illness; treating him with small and repeated doses of spirit, under the popular idea, rendered still more popular by the endorsement of some eminent physicians, that "the hair of the dog is good for the bite."

Now, what is the cause of delirium tremens? An accurate determination of this will contribute no little to facilitating our investigation into the *nature* of the disease, and to giving point and efficacy to our treatment. The predisposing cause in the cases cited was certainly the free indulgence in alcoholic drinks. The existence of this cause we believe to be *always* necessary for the occurrence of the disease. It is true, we read of cases occurring from the immoderate use of tobacco, and also of opium. But the very extreme rarity with which such instances have appeared among those using these articles in the most immoderate degree, leads us to throw them aside, as not possessing sufficient claims to genuineness to affect our opinion, in endeavoring to arrive at a just idea of what it is that is producing the peculiar phenomena of the disease.

There is no madness whatever "method," it may assume, that is not entirely distinct from the delirium of drunkards. It is useless to enumerate the differential symptoms. There is no practitioner accustomed to the disease, who is not persuaded of this fact. For the production of these peculiar symptoms, we believe it absolutely necessary that the patient should have indulged in alcoholic drinks. The very peculiar optical delusions which may be said to occur in almost every case of delirium tremens, and which are more numerous and varied the longer the period of indulgence, may possibly be owing to the absorption of alcoholic globules in the blood, and their consequent presence in the refracting media of the visual apparatus. This, of course, can be merely conjectural; but we think we will be sustained by all the facts and effects observable, in contending that the mental hallucinations, as distinguished from the delusions referred to, can only exist from the direct presence of alcohol in the brain, or from its peculiar reflected impress upon the great nervous centre of all intelligent life.

The immediate or exciting cause of delirium tremens in the cases above was *not* the *abstraction* of accustomed stimulus. None existed. The patients were seized in the freest and fullest employment of the accustomed stimulus. We do not believe such abstraction *ever* exists as an exciting cause. The strongest instances in support of this view occur in certain cases of surgical accidents, where a man is thrown down on his back, say by a fractured thigh, and his grog is cut off or diminished. He is attacked with what the doctor calls delirium tremens, and his allowance is increased; and he is taken through a regular course *up* to a certain point, and then down again the other side, until he is made to taper off from all spirituous drinks. We have never seen one case of this character which we thought an unequivocal case of the disease in question. One of the most strenuous advocates of the doctrine that delirium tremens is produced by an abstraction of accustomed stimulus makes the same confession.* We believe the immediate cause, as well as the predisposing, is the direct presence of alcohol in the system, and that the point of commencement of the disease is the period when the system has become surcharged with the poison.

The brain becomes flooded with the noxious potion absorbed by the stomach, and hurried through the whole circulation by an excited heart. The nature of the disease consists in irritation of the brain. An irritation excited by the direct presence of alcohol in its own capillary system, and an irritation reflected by other over-loaded and over-worked organs. This irritation cannot exist for any great length of time, however, without becoming something more than a pure nervous irritation. Brain matter, when macerated in alcohol, after being removed from the calvarium, soon becomes indurated. There is no reason to doubt that this one change, at least, often occurs in the brain of the chronic inebriate, which is almost constantly saturated with such poison. The excited, and often the congested condition of the organ in habitual hard drinkers would very naturally induce other organic changes, also, and thus lead to other complications of the disease.* Primarily, however, delirium tremens may be said to originate in irritation of the brain, immediate and reflected. It may be recognised in two stages. The first may be designated as the acute stage. In this there is irritation, with power to give active manifestation of the symptoms. Such is the disease as seen in robust or healthy young persons unaccustomed to regular drinking but who are apt to be attacked after some days of excessive indulgence. With proper treatment, the disease may be cut short in this stage. It is the one usually seen in most cases of private practice.

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* See Encyclopedia Practical Medicine. Art. Delirium Tremens.

If the disease be neglected until exhaustion begin to ensue, or if it primarily occur in weakly, debilitated subjects, or in those having had many previous attacks. We then have an example of chronic delirium tremens. In this stage there is irritability, *without* power to give *active* manifestation of the symptoms. The condition is one of irritability with exhaustion. Such are the cases *par excellence* that have been considered as originating in a deprivation of accustomed stimulus. More truly these cases have been exhausted under excessive stimulation. Nature can be plied with excitants until she is worn down under the activity which they create, and will sink in the end, under a futile attempt to respond to their impression, and die with symptoms of exhaustion. We say, symptoms of exhaustion; but the condition is better described perhaps by the calling it one of *oppression*. Remove the weight under which the system has been goaded by unnatural stimulation, and if it be not exhausted by its attempts to relieve itself, it will soon regain its healthy state. Sure it is that further supplies of the same stimulus cannot impart *strength*. It were equally futile as to bind a man with strong cords, and to worry him with torture in endeavouring to make him break them.

But this conducts us to the treatment. There are two chief indications to be kept in view. 1. The depuration of the blood; the removal of the immense amount of hydro-carbonaceous material circulating

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*** See Carpenter on Alcoholic Drinks. Essay.**

in that fluid, and pervading the organisms. 2. The soothing of nervous irritation—the quieting of nervous excitement.

With these indications in view, it will become necessary in active delirium tremens, which we have termed the acute stage, to resort to sedatives—sometimes the most efficient and immediate that we can command. Occasionally it becomes necessary to resort to venesection in large quantities, in order to relieve a brain on fire with alcoholic stimulus, and to which a maddened heart is driving, with every pulsation, fresh supplies of the noxious poison. Generally, however, with the use of local depletion, saline cathartics, tartar emetic,* digitalis, calomel, the warm bath, &c., the case may be either relieved or reduced to the 2nd or chronic stage. In many instances, the physician is not called in until the supervention of this stage. Especially is this so in the case of those who have had many attacks of the disease, and who are apt to pass through the first stage unconsciously to themselves, and without giving any evidences of violent conduct or even of impropriety, that would excite the suspicions of friends.

We know a person, in all else than his misfortune, a gentleman, whose first intimation of an attack of delirium tremens is the occurrence of some optical hallucination. This he is aware of, and calls it his "point of endurance." Experience has taught him a better therapeutics than that inculcated in the books. He, himself, discovered, that by "stopping his grog" at this point, he cut short the attack. A depression may ensue consequent upon a want of stimulus; but he has discovered, doubtless, that this does not constitute the disease which he dreads; and he has found it to be a more desirable condition than that which he is aware will be induced by a continued supply of the "stimulus." In this stage, the blood becomes surcharged, and the brain loaded with the accumulated supplies of daily debauch.

We afford the relief so strongly called for, and meet the main indication—First, by withholding all further use or abuse of alcohol. Reason and decision, not the dogmas of the schools, for the importunity of the patient; not his cold, shivering grasp, or his maudlin imprecations, must control the practitioner. Liquor has been his bane; it will not prove his antidote. 2nd. Stimulate and restore those suspended secretions whose office it is to depurate the blood and to equalise the obstructed circulation.

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* [The value of tartarized antimony in the treatment of delirium tremens in the acute stage, deserves especial attention. Given alone, as in the method proposed by Dr. Peddie; (*Edinburgh Monthly Journal of Medical Science*;) or used in combination with calomel and opium, to quiet nervous irritability, excite the biliary functions, (the first step necessary to the process of cure,) and procure sleep, the tartrate of antimony and potash will be found an invaluable adjuvant, and oftentimes a positive specific in the treatment of this affection.—Ed. Note.]

The liver is unquestionably the first organ to which we should look to effect the cleansing of the circulating fluid. The lungs, whose especial office it is to burn off the the excess of hydro-carbon of the blood, become entirely unable to accomplish this object even in the tolerably moderate drinkers of this climate, and in the case of drunkards, cannot be at all relied on. In all diseases of such persons, the seriousness of the hepatic distress and derangement, constantly attracts the attention of even the careless observer. In the cases of delirium tremens which we have recorded, there might have been noticed, enlargement and tenderness of the liver, fulness of the hypochondrium, congestion of the portal system, and either suppression or great perversion of all the intestinal secretions. What condition of the body so plainly indicates the exhibition of mercury? What remedy so well fills the indication. A sedative and tranquilizing agent in its primary action upon the stomach and bowels, it, in addition, early restores and corrects the suspended and perverted secretions. Under its influence, the liver soon begins to pour out a black, viscid bile, the intestinal capillaries throw back the nauseous poison they have been forced to imbibe, the kidneys hasten their distilling process, and the work of depuration is begun. The blood is purged of the materies morbi, the nervous centres are freed from their unnatural potion, the viscera are relieved of their engorgement, the circulation is equalized, and the system, if not restored to a healthy condition, is at least fitted for the sure action of the only remedy required to complete the cure.

The nervous system, as in the case of a person rallying from the shock of some sudden depressing power, also needs steadying and support. But we cannot conceive that this should be furnished by alcoholic stimulants. They can create only a false support, and while they proffer strength, will undermine the frame. It must be done by recruiting the blood with healthy pabulum, thus sending wholesome nutrition to the originating sources of nerve power, and by the exhibition of such drugs as are known to exert a soothing and composing influence.

As soon as the condition of the patient will warrant it, or his stomach will receive food, furnish him with rich nutritious broth, with soft boiled eggs, and with milk; gradually allowing him the most digestible and easily assimilated of the highly nutritious aliments. Quiet his nervous agitation with *opium*. This drug and its preparations, especially the salts of morphia, hold a deservedly high position in the treatment of all conditions of nervous irritation and excitement. We see no reason to substitute it by the uncertain extracts of any other of the solanaceæ in the treatment of the disease in question. In this disease, particularly, opium has long been regarded by some as a specific; by almost all as an essential adjuvant to any treatment.

A grain of opium or a quarter of a grain of morphia administered after the cerebral congestion has been relieved in acute cases, or in combination with calomel, and if preferred, with camphor in chronic cases, and repeated, if necessary at proper intervals, exerts a most soothing and benignant influence. We do not resort to opium as an excitant, nor does it operate as such. It proves essentially a sedative; it soothes, composes and quiets irregular and excited nervous action. We do not resort to it as a narcotic, that is, with an immediate view of inducing sleep. Nor do we even leave directions for the anodyne to be repeated *ad infinitum*, until the patient sleeps. We have not therefore, perhaps recorded any cases of the marvellous power of resistance to narcotism exhibited by those suffering under delirium tremens. We believe many a patient, under this injudicious course, has fallen into a slumber that has known no waking. We should be satisfied with inducing quiet—with composing nervous agitation, and trust to better remedies to work the cure. Purge the life-fluid of its poison, restore the action of the different emunctories, equalize the circulation, obstinately withhold all further cause of the disease, and under a very moderate administration of opiates, the patient will often fall into a gentle sleep, from which he will awake, as it were, "clothed and in his right mind."

We do not wish to be understood as contending that the pure sedatives, as bloodletting, digitalis, &c., with or without mercurial cathartics, will *always* prevent the supervention of the second stage of delirium tremens, if administered however early in the first; nor that calomel will cure the disease, if administered uncombined, in any stage; but simply to impress upon the profession the extreme importance that we attach to these remedies as the precedents of opium in all acute cases, and as its essential concomitants in chronic cases. We believe we are sustained in these views by the acknowledged medical fact of the impropriety of too suddenly checking an attack of cholera morbus, when occurring during a drinking bout. Check at once the inordinate secretions that are pouring out from the intestinal mucous membrane, lock up the liver with opium, and how heroically soever you exhibit the narcotizing drug, you give your patient delirium tremens. Here we have the remedy producing the disease; not in its own peculiar action, but by interfering with the efforts of nature—the wisest of all physicians—to relieve herself.

Another indication for the exhibition of mercurials, especially in chronic cases, is the probability of the complication of the disease with organic changes in the brain. No man can indulge in the habitual immoderate use of ardent spirit without running the risk of inducing such changes. No physician can have attended many cases of old drunkards without being frequently aware that such changes were occurring. Paralysis, tremors, sometimes fatuity—if life last sufficiently long—will precede an acute attack, which will terminate in convulsions, coma, and death. The scalpel will confirm the diagnosis.

Of the impropriety of the treatment of cases of delirium tremens by the exclusive use of opium, where organic cerebral changes are feared or suspected, there can be no two opinions. The danger of inducing these changes, when not actually existent, by such a course of treatment we think sufficiently great to influence every practitioner to avoid it. Especially, when a " more excellent way " can be pursued.

Of the exclusive treatment by the continued administration of alcoholic drinks, it will at once appear, that if our views of the nature of the disease be correct, this must be altogether wrong. We can understand how many a patient may recover under this treatment, as under the expectant method. Its efficacy consists not in the exhibition of brandy, but in its *gradual withdrawal.* Nature is thus allowed opportunity to recover her strength, and she works the cure by eliminating the poison. We can also understand how a patient may become so thoroughly impregnated with the infection of typhus—and many of the entrees into the elemosynary institutions of the large cities are—as to labor under the combined effects of two blood poisons. And of these poisons we should prefer the liquor poison to the typhus poison, and should not hesitate to attempt to drive out the one with the other.

But we believe no cases of this character occur in this vicinity, especially in private practice.

The *morale* of the treatment of delirium tremens by the determined abstraction of alcoholic drinks, we should not perhaps discuss in this place. We will only say, that whilst no intelligent physician would sacrifice human life to his personal scruples, no conscientious one would be unaffected by such considerations.

ART. IV.—*On Cholera.* By J. N. BROOCKS, M. D., Richmond.

In presenting some views of cholera, which at this time occupies so much of public attention and interest, I desire to confine myself as closely to the treatment of the confirmed or developed stage of this disease as possible, to make myself intelligible; passing over the forming and milder stages which are readily obedient to treatment. It will be necessary for me, however, to take a cursory glance at the exciting causes of the disease, the effects of the epidemic principle on the system, the symptoms during an attack, and the morbid appearances presented after death.

Any powerful moral or physical cause, all kinds of indigestible food, and over-eating will bring on an attack. Vegetable more frequently than animal food is the exciting cause of this disease. Almost every one in the community where cholera prevails in an epidemic form, is sensible of being more or less under its influence. "The phenomena are a furred tongue and pasty mouth, the appetite is lessened or destroyed, the digestive power of the stomach is enfeebled. After eating, there is a sense of weight, distention or other uneasiness in the stomach. The abdomen feels tight, uncomfortable, often painful; and the bowels are frequently disordered, the evacuations being sometimes preceded by pain and accompanied with slight tenesmus; or fluid and unattended with uneasy sensations." All are more or less dyspeptic at this time, and should observe the diet required for the dyspeptic patient.

The symptoms at the advanced stage of the disease are usually vomiting, purging, pains in the abdomen, great thirst, constant desire for cold drinks; evacuations upwards and downwards, frequent and copious, like barley or rice water, or coloured like the washings of butcher's meat, and sometimes as transparent and clear as spring water; and the amount passed in a short time often enormous. Sometimes there is no vomiting, but purging; and some of the most malignant cases are attended with neither vomiting, purging or spasms. (I have never seen but one case of this character. He came into the hospital at the Penitentiary, during the epidemic of 1832, with cold extremities, tumid abdomen, great prostration, and with a pulse so feeble as scarcely to be distinguished. He was in no pain, and was a corpse in about an hour.) In this stage of cholera, the respiration is oppressed, short and frequent; the countenance manifests great anxiety, with a feeling of suffocation. The force of the circulation feeble; the capillaries nearly stagnant, causing a leaden colour of the surface; the plump and rounded form of the body gone, presenting a sunken and shrivelled appearance. The surface cool or cold; copious perspiration laying in drops, sometimes, on the surface; spasms occasionally absent, but generally truly awful. In some cases every muscle is violently cramped. There are no evidences of glandular secretion; no bile appears in the evacuations, and no urine is secreted.

Autopsy.—Dr. Parkes, of London, Assistant Physician to the University Hospital, in his *post mortem* examinations of 46 males, found the following appearances, and arrived at the following conclusions therefrom: "*Head*—I conclude that the most usual appearances in the head consist in the accumulation of blood in the veins of the dura and pia mater, and in the effusion of serum or of blood consequent upon this. This congestion is sometimes as great in recent cases, as in cases of consecutive fever, with head symptoms. It is considerable in the most malignant cases, but I am unable to say, whether the accumulation of blood, and the rapidity or the malignancy of the case bear to each other any determinate ratio."

"*Lungs.*—The most common appearances in the lungs are, the presence of blood in the larger vessels chiefly or solely. The collapse and the deficient crepitation being caused by the complete absence of air and blood, and by the approximation from some unknown cause of the molecules of the pulmonary substance. In other cases there is more blood in the minute structure, a corresponding dark colour of the lung and a variable amount of frothy serum; the quantity of frothy serum bears an inverse ratio to the degree of collapse."

"*Heart.*—The right side of the heart and the pulmonary arteries were generally filled, and in some cases distended, with blood. The left side and aorta generally empty, or contained a very small quantity of dark blood. The inference, which was drawn from the state of the cavities in the greater number of cases was that the right side had continued to receive blood till, in some cases, it had become full and even distended, while the left side had received little or no blood, but had continued to contract, in some cases very violently, on the last drop of blood which had entered it."

"*Blood.*—It appeared probable, from all the observations, that there was a deficiency in the quantity of fibrin or a great tendency to the separation and deposition of this ingredient; that the red particles were sometimes partly dissolved in the serum, but not in other cases appreciably altered in figure or appearance. The blood did not perfectly coagulate in any case, and in a little less than a fourth of the whole number, the blood did not coagulate at all in or out of the body, and whether coagulated or not, had a dark colour, but generally assumed an arterial tint when exposed to the air in thin layers. Nitrate of potash, chloride of sodium, &c., added to the blood, always gave to it a bright arterial hue, and a few drops of the thick substance from the intestines, produced the same effect. The liver normal, in the majority of cases; the spleen contracted, and contained very little blood, and firm in consistence."

"The bile secreted either before the attack or in the early stages of the disease, was unchanged—there was some accumulation of blood in the larger branches of the vena porta and hepatic vein. In the stomach and intestines there were some turgidity of the larger vessels; ramiform congestion of the mucous membrane; slight flushing of the peritoneal surface, and enlargement of the solitary and agminated glands."

Dr. George Budd says, "If we regard the morbid changes with the view of ascertaining the seat and nature of the disease, we shall perceive that the chief of these changes are offered by the intestinal canal and by the blood; the condition of the latter, as to fluidity and colour, being sufficient to account for the unusual appearance of other organs in patients who die in the cold stage. In the intestinal canal, the principal alterations are unusual development of the intestinal glands and follicles, increased vascularity, and unnatural thickness of the mucous coat, from its impregnation in the entire extent of the stomach and small intestines, with a fluid similar to that constituting the discharges. In the blood, chemical analysis has discovered little more than the diminution of its serous parts."

Treatment.—In this disease there exists perhaps greater difference of opinion as to the best and most successful treatment, among intelligent and experienced physicians than is found in most others, and no disease affords a stronger exemplification of the truth of the old Roman maxim, "*Experientia fallax,*" than cholera does. This is owing, most probably to the influence which age, sex, temperament, previous health and habits of the patients, the difference of malignancy in the different epidemics, and in different periods of the same epidemic, and the different localities in which it has appeared, exert on the progress and result of the disease; and its rapid course giving but little time for comparative and experimental observations. Until these influences shall have been more thoroughly investigated, and better understood, no reliable induction can be made as to the treatment best calculated to insure success under all circumstances. We can only be guided, therefore, by the symptoms, the effects of the morbid agent, our knowledge of the properties and mode of action of medicines; and even here, we cannot expect uniformity of opinion. As long as men's minds are so differently constituted, so long will they have different views, not on medical subjects alone, but on all others.

The most striking symptoms are presented by the circulation, respiration, temperature, thirst, colour of surface, prostration, spasm, the escape of serum from the stomach, bowels and skin, and the suspension of glandular secretions. The most important changes are found in the stomach and intestinal canal. The most frequent exciting cause of the disease is indigestible food. In the epidemic at St. Petersburg, in 1848, Dr. Muller says, "undigested food was found in the stomach in a third of all the cases." To relieve the stomach of this irritant substance, I give a teaspoonful of mustard in a glass of warm water; and repeat the dose, unless it produce emesis. The next most important indications are the arrest of the serous purging and the relief of spasms, and unless the former be done very speedily, the patient will soon be beyond the reach of human skill,—our science can avail him nothing. For this purpose, I administer large doses of opium and laudanum, both by the mouth and by enema. Unless used in very potent doses, when the discharges are profuse, they will be of no service. I have, in very bad cases given as much as ten grains of opium at a dose, without exciting the least symptom of narcotism. With the opium, I combine the acetate of lead in full doses, and occasionally have derived benefit from the tincture of rhatany in combination with laudanum, as an enema.

As many of my medical friends whose skill and judgment I hold in high estimation, do not use opium in this stage of cholera, I will present *some* of the reasons which induced me to administer it so freely in the epidemic of 1849. All medical men, I believe, have great confidence in its power of relaxing spasms occurring in other diseases. It is the most potent agent we have in these cases. Will it not have the same power over the spasm of cholera? or is there any reason why it should not be given in cholera? Will the prostration, which is regarded by some to be of a nervous character, be increased by opium? Suppose we admit the depression to be of the nervous system, although some patients manifest great muscular power immediately before dying. This admission will probably afford the strongest reason for its use in *large* doses. Does not a patient, greatly exhausted by uterine hæmorrhage, present a case very analogous to one prostrated by the serous flow of cholera, and if opium be thought so valuable here, why not in a similar condition in cholera? In this case, it is regarded as a re-active and not a depressing agent. But the relief of the spasm and rousing the waning powers of life, are not the only properties which opium possesses which renders it valuable as a remedial agent in this disease. It exerts a soothing influence on the mucous surfaces of the stomach and intestines, and opposes the tendency of the fluids to these surfaces, by its action on the capillaries of the surface, and by "contracting the circulatory vessels and the excretory ducts," aided by the astringent action of sugar of lead, arrests the discharges.

Dr. George Stewart Hawthorn, formerly senior physician to the Belfast Hospital, regards cholera to be a paralysis of the tone and energy of the brain and nervous system. In malignant cases—that is, with "great languor and depression of spirits, giddiness of head, soft, small and variable pulse; tongue cold, flowing with saliva, relaxed, broad and tremulous, heat of skin below the natural temperature; no cramps or pains, but an indescribable sense of anxiety, and crushing of the heart, accompanied with watery purging and vomiting, or with watery purging alone," gives the following prescriptions, which he calls anti-spasmodic pills and anti-spasmodic mixture; ten of the pills and two ounces of the mixture taken in a glass of brandy, flavoured with ginger or cloves.

℞. Pulv. Opii., grs. xij.
Pulv. camphor., ʒss.
Capsicum, grs. ix.
Spts. wine and conserve of roses, aa., q. s.
Ft. pil. No. xij.

℞. Chloric ether,
Aromatic spts. of ammonia,
Camphorated spirits, } aa. ʒj.
Tr. opii.,
Cinnamon water, ℥ij. M.

Dr. Graves has great confidence in sugar of lead. He says, "You are aware that during this epidemic, which commenced its fearful career in Dublin in the spring of 1832, the modes of treatment principally relied on were, bleeding in violent spasmodic cases, emetics of ipecacuanha, and mustard, the application of heat externally and internally, stimulants, but above all calomel, not in small, but in large and frequently repeated doses, either alone or combined with opium. I need not tell you that the mercurial treatment came to us sanctioned by high authority. It was a remedy to which the experience of Indian practitioners had given a high character, but in our hands it proved of very little value. Be this as it may, I must say, that I had reason to be dissatisfied with this mode of treatment. I had tried it myself; I had seen it tried in every way which ingenuity or experience could suggest, but I had seen it fail in almost every instance." About the middle of the last epidemic, he was, in his private practice, called to several cases of the malady not advanced to the stage of collapse, having merely commenced, and the intensity of the disease was still far away. He tried calomel and all the ordinary remedies unsuccessfully. He could no longer place confidence in the remedy, for it had signally failed. He then advised the use of sugar of lead and opium, in full doses, "and had the satisfaction of finding that the diarrhœa soon yielded." He subsequently adopted this treatment in all the stages of cholera, and with such *marked success* that it soon became the universal practice of Dublin.

To restore warmth, to sustain the sinking vital powers and to determine the circulation to the surface, I used stimulants internally—brandy, camphor, capsicum—and sinapisms, and stimulating frictions. I found ice to be best adapted to allay the urgent thirst.

As soon as the discharges were arrested, and the stomach retained fluids, I gave them very freely, as freely as the stomach would bear them and the absorbents take them up—and it was highly gratifying and almost marvellous to observe, in some cases, that as the bland and nourishing fluids, such as chicken water or milk were absorbed, how the blood vessels became filled, the countenance would expand, the contracted and shrivelled appearance of the body give place to its usual roundness, the discharges became thicker and thicker, the glandular secretions restored, the respiration free and easy. The pulse would increase in volume and become slower; the heart would beat with energy, the livid hue of the surface, the oppression and sense of suffocation would vanish, and the almost dying patient suddenly snatched from the grave, and restored to his family and friends with renewed life and hopes.

To prevent the constipation, which very often succeeds an attack of cholera, I added one grain of calomel to Graves' pills of lead and opium—(℞. *Pulv. opii.*, gr. j; *acet. plumbi*, ℈j; *hyd. chlor. mit.* grs. xij.)—one of these were given as often as might be necessary, with the hope that if not washed away by the profuse discharges, the morbid action being corrected, it might act on the glandular organs and produce an operation. If it did not, I would give a dose of lac. sulphur, or soda and rhubarb, or an enema of warm water.

I have very imperfectly presented the outlines of the treatment which I regarded to be best calculated to meet the indications of cholera as it appeared here in 1849, and with which I was most successful in its treatment. Individual cases require some modification in the details of treatment as regards auxiliary agents, just as in other diseases; and I am satisfied that all who will pursue this treatment with sufficient energy and boldness, will be pleased with the result.

With regard to calomel, I must say that I cannot place reliance upon it in this disease in its confirmed stage. In the earlier stages I have derived benefit from it, and use it combined with opium and camphor. The absence of bile in the discharges, and the power which calomel is known to have over the secretion of the liver under ordinary circumstances, gave origin to its use in cholera, and is the principal argument urged in favor of its administration. No bile appearing in the intestinal discharges, affords no positive proof that none is secreted, or that none is in the gall bladder, any more than a retention of urine is evidence of its non-existence in the bladder. On the contrary, the gall-bladder has *always* been found filled with bile on autopsy, and this fact suggested to pathologists the hypothesis that spasm existed at the mouth of the common duct; which prevented its exit and appearance in the discharges. They found on making pressure on the distended bladder that no bile was forced from it, although filled with it. I believe, however, that in confirmed cholera, the secretory function of the liver is wholly suspended, and that the bile found to have been secreted by it was done in the early stage or before the disease attacked the patient. All the glandular secretions must necessarily be suspended in confirmed cholera for want of the material from which to secrete. That of the kidney we know to be, and that urea abundantly exists in the blood. The secretions cannot be restored until the serous flow be arrested and the absorbent system resume its functions, and replenish the blood vessel system with fluids.

A striking illustration that the phenomena depend, in a great degree at least upon the loss of the watery portion of blood, is afforded by the effect which the injection of fluids into the veins produces. In this case, the injected fluid serves as a temporary substitute for the watery portion of the blood which has escaped. "The pulse returns, the temperature revives, the precordial distress is relieved, and for a period the patient appears perfectly restored." This re-animation is but of short duration; the injected fluid soon leaves the system, and the patient falls back again into his moribund state.

The suspension of the secretion of the liver is no more a cause of the disease and has no more influence on its progress and termination than that of the kidney or other glands, and calomel cannot act upon this organ, it cannot be absorbed, as there is now no absorption; and even if it could be, in the time necessary for its absorption and action, the profuse watery discharges would place the patient beyond the reach of human aid. Mr. Orton, in his work on cholera says, that calomel was found adhering to inflamed patches on the internal surfaces of the stomach and intestines of many who died of cholera in India, and frequently found at the bottom of the fluid contents, and adhering at various places to the mucous coat.

Dr. Hughes, of Guy's Hospital, speaking of the cases which he had seen treated by small doses of calomel frequently repeated, says: "I believe that all or nearly all the patients treated, died; so common indeed has been this result, that latterly, when on entering the sick room, I have seen some dozen of powders upon the dressing table, and have found the patient's tongue coated with white, as from so much chalk or carbonate of lead, I have at length assumed that his fate was certainly sealed. I regret to express my belief that I have been rarely mistaken." He thinks the most important point in the treatment is, to stop the drain from the alimentary canal; "and for this purpose he found nothing so effectual as a large dose of solid opium, by the mouth, followed by astringents and opium in a fluid form, together with an enema of a small quantity of warm gruel and a full dose of laudanum." If these means are employed early in cholera, (and by cholera I mean neither diarrhœa, however profuse on the one hand, or the collapse of the cholera on the other,) I believe they will frequently be effectual in checking the disease. They have certainly been the most efficient remedies I have myself employed, or seen employed.

At a meeting of the London Medical Society, Dr. Golding Bird said, with respect to the calomel treatment, used in small and often repeated doses, that he had seen much of it used both at home and abroad, and had tried it himself, carefully, assiduously and constantly; and he had come to the conclusion that it was of no benefit whatever. He could only reiterate the opinion of his colleague, Dr. Hughes, on this point.

As regards collapse when fully formed, it is a hopeless state; and in the opinion of a graphical writer, "when the disease has arrived at this stage, little good can be effected by medicine. The recoveries from this state are to be chiefly attributed to the '*vis medicatrix naturæ.*' This is not mere assertion; it has been proved. I have seen more instances of recovery from collapse in persons who utterly refused to take any medicine whatever, during the whole course of the disease, than I have witnessed in those who have been treated by the popular remedies. These were persons of peculiar habits of body; thin, lean, emaciated habits, with little fibrin or crassamentum in their blood. The great advantages which these persons enjoyed from the tenuity of their blood, was, that the heart, arteries, sinuses and lungs did not become obstructed by the masses of fibrin which obstruct the circulation in the collapsed stage in those of more robust habits, and of more healthy bodies and sounder constitutions. I have been called, on passing, to see an emaciated old woman, lying on a truss of straw, on a cold, damp and earthen floor; her body and features collapsed, clammy and cold as a mass of ice, with scarcely any covering over her, and with not a vestige of a pulse to be felt at the wrist or on any part of her extremities. She suffered with intense burning thirst, and with her hoarse, stridulous voice she cried incessantly for cold water, which was no sooner allowed her than it was rejected by the stomach. The poor creature, I could not persuade to take any medicine; but I directed hot substances to be applied around the body and extremities, and allowed her urgent desire for cold water to be gratified. On passing the next day, I had the extreme gratification to find her out of danger; her pulse full, soft and regular; the natural heat of the body restored; the veins full, and the countenance and hands restored to their natural appearance. Such instances as this, in both sexes, have frequently come under my observation, but more frequently in the case of old women, than in men of the same ages. I think it right here to state, that from the nature of the disease, no person of a robust, corpulent habit of body could recover from collapse."

A similar case, I have understood, of recovery, came under the observation of the late Dr. John Cullen, during the epidemic, in this city, of 1832. In this case, however, no hot substances were applied; cold water alone was allowed to the patient.

In the discussion of this deeply interesting and obscure disease, it will be observed, that I have regarded the authority of experience only so far as it seems to me to be sustained by sound medical philosophy, and when I have appealed to it, it was to confirm the correctness of the conclusions and the treatment which the principles I have endeavoured to represent, led me to adopt, as illustrated by the practical results in the experience of physicians justly distinguished in the medical world, and who occupied positions most favourable for extended observation and comparative experience.

LECTURES.

I. *Lectures on Fevers.* By WILLIAM STOKES, M. D., Regius Professor of Physic in the University of Dublin.

LECTURE IV.

It was my intention to have commenced to-day the examination of the more important secondary diseases of fever; but we must postpone this part of the subject, and take the opportunity of studying the general symptoms of fever as they are presented, in their most aggravated and appalling form, in the case of the young man Hardcastle. This patient is a native of England, and has been but a short time in Dublin, and his case is full of instruction.

I have mentioned, that this patient is not a native of Ireland, because it is probable, that this circumstance has acted in modifying the symptoms of his disease. Had this patient been attacked with fever in his native place, he probably would have shown the symptoms of what is called typhoid fever, and the case would have been a comparatively mild one. But, at all events, this much we may believe, that different countries present endemic, sporadic, and even epidemic fevers, with characters in some degree peculiar to themselves; and we are not yet able to explain, why fever in one country differs so much from fever in another—why maculated typhus should be so common in Ireland, and so rare in England—nor why the fever in Paris should so constantly present a particular local lesion. Many causes, doubtless, act; and I suppose among others, such as climate, diet, soil, and so on, that the race and temperament are to be reckoned. And I have suggested that, if the various families of mankind have a physiological stamp, they, probably, have also their pathological peculiarities; however this may be, it becomes a curious subject of inquiry, to determine what are the modifications of the symptoms of the fever in Ireland or in any other country, when the patient is not a native of the country, and especially if he has not been long resident in it. The most extraordinary case I ever witnessed was that of a gentleman, a native of France, who, after a long exposure to contagion, contracted maculated typhus here. He was a man of a sanguineo-nervous temperament, and exhibited, during his illness, a succession of symptoms widely different from those which we commonly see in the spotted typhus of this country. He was profusely maculated, and the peculiarity of the case consisted in the irregular manifestations of various local symptoms, and the inconstancy of the general condition, especially with reference to excitement or collapse. This gentleman happily recovered, after passing through a storm of disease, such as I and his other attendants, Dr. O'Ferral and Dr. Graves, had never seen before.

Hardcastle is a young man who has been well educated, and he is evidently above the rank of the ordinary hospital patient. His symptoms have been, from an early period of the disease, alarming in the highest degree. You will seldom see a worse case of adynamic fever. We may safely say, that for the last fortnight, both by day and by night, there has been an uninterrupted struggle between Medical art and the fell disease which is upon him. During that time he has been lying more like a decomposing corpse than a living man; but he has been kept from dying, by the bold and constant exhibition of stimulants, by tonics, and by food.

Some of you may wonder why it is that we thus go on with the increasing exhibition of stimulants—the untiring efforts to support life; although for the last ten days, at least, we have been hourly expecting his death? And the answer is, that we believe his disease to be one which may subside, sooner or later, under the law of periodic action. His recovery will then take place,—not in consequence of the action of any specific which has the power of curing fever, but from causes the nature of which is hidden from us. We are like the defenders of a post attacked by a powerful enemy, but yet expecting succour, and we seek to hold the place until that succour arrives.

There are two points in this case worthy of notice. One is, that the nervous system has been so little engaged. He has had occasionally a slight delirium, and latterly some agitation and slight subsultus tendinum; but, though he generally appears sunk in stupor, it is not true coma, but rather the stupor of exhaustion, for, when you rouse him, his intelligence appears to be good. Is this escape of the brain to be looked on as favourable, or the contrary? According to an old and well-founded opinion, all anomalous circumstances in fever are to be feared. You know the aphorism, "*Pulsus vultus et urina, bona, et æger moritur.*" This contains an important truth; but, in typhus, the want of nervous symptoms is in general favourable; for of the symptoms referrible to one of the three cavities, doubtless those indicating nervous lesion are the most formidable.

The second point to which I wish to direct your attention is, that, although this patient presents the symptoms of typhus so decidedly, he cannot be said to have any maculæ or petechiæ. In fact, his skin has been unaffected; there has been none of the so-called exanthematous eruption of typhus; and, even at this advanced period, the existence of petechiæ is so doubtful, that I would not say that he has them. Yet, if ever a man had the *typhus gravior*, this man has it. His surface exhales the peculiar odour of typhus, strongly marked; he is prostrated to the last degree; he has been kept alive by the most powerful stimulation; he has a feeble heart, and well-marked secondary affections of the intestinal and bronchial surfaces; his mouth is full of sordes; his tongue black, dry, and cracked; his breath fetid. The stethoscope indicates a general and severe bronchial affection, and there is a wasting diarrhœa.

I am not going to take up your time by a discussion as to the distinctive characters of typhus and typhoid fever, about which so much has been written of late. But it would be, I think, difficult even for the advocates of the distinction, to declare in which class this case should be placed. In this instance, as in most others, the settlement of the question is of little value; for, whether the disease be typhus or typhoid fever, the treatment should be no other than that which we have so far carried out. I may say this much, however, that the presence or the absence of an early eruption having some similarity to an exanthem; or, again, the presence or absence of petechiæ, appears to be insufficient to justify our drawing a strong line of distinction between these diseases. As to the doctrine, that the early eruption in typhus is a true exanthem, and that its absence in any given case points out that the disease is not typhus, but typhoid fever, I would advise you to receive it with more than caution. Again, it is stated, that the non-maculated fevers are often protracted and dangerous; so they are, but not so often as they are short and easily managed. And I have not seen that relief of organs in typhus, which some describe as the rule, when the eruption appears. How, then, are we to look on the eruption? Certainly not as a distinctive mark between two different diseases. Gentlemen, we know that typhus fever will run its course, and destroy life, without the production of any hitherto ascertained anatomical change. We know further, that in many cases, local alterations are formed; but, that there is the greatest inconstancy in different epidemics, and in different patients during the same epidemic, in the seat, amount, in the time of appearance, and in the results of these local changes. The cutaneous affection is plainly one of this group of secondary affections; and its absence or presence can no more be said to distinguish the disease, than the absence or presence of any other of the secondary affections. I think we may admit, that an early and florid eruption is often met with in cases in other respects well marked; and again, that such cases generally require and bear stimulation.

To return to the case of Hardcastle. We observe that there has been as yet no tendency either to the critical or periodical retrocession of the secondary diseases, nor to the critical or periodical termination of the general affection. The 14th day passed by without any crisis or without any subsidence of the disease; the 18th day passed by; the 21st day has passed by; and he is now in the 24th day of this terrible disease, kept alive by the use of wine, administered every hour, and also by the occasional free use of hot brandy punch. He presents an appearance to-day to which I wish specially to direct your attention. You may remember that Saturday last was the 21st day, and it was then reported to me that the patient was getting a bed-sore. Upon examining him, we found, in the ordinary situation of bed-sores, a blush of redness and a slight degree of œdema; and beyond that there was nothing remarkable. There was this point, however, which I observed at the time although it was not until to-day that I thought it of importance, namely, that there was already a solution of continuity of the skin. Now, this is remarkable; and if such a case should occur to me again it would awaken my attention. In the ordinary cases of bed-sores, we seldom see a solution of continuity of the skin in an early period; we see lividity, blackness if you will; but a solution of continuity of the skin before the ordinary appearances of mortification have occurred, is extremely rare.

In this patient, on Saturday, just at the very centre of the livid patch on the skin, there was a slight solution of continuity. During the evening, the nurse observed that several dark-coloured vesicles or pustules were making their appearance on various parts of his body. Mr. Parr saw these on Sunday, and he found that between the shoulders there was an eruption of livid tumours, which appeared to be something between vesicles and pustules; and to-day (Tuesday) such of you as saw the patient will not soon forget the extraordinary appearance of his back. I have been attending on fever in this Hospital since 1827, and I never saw anything of this kind before. Now, it is a very remarkable circumstance, that this eruption of gangrenous vesicles or pustules should have occurred upon the twenty-first day; and this case, as far as it goes, appears to strengthen an opinion which I have long held, that we were in error in attributing what are termed bed-sores in fever, simply to mechanical causes. The general idea is, you know, that they are simply the result of pressure long continued on a particular part of the body, from the neglect of turning the patient in bed, of pressure combined with the effects of position. Now, there can be no doubt that these are predisposing causes, but whether they are the sole and entire causes is another matter; and I am, to a great degree, convinced, that the bed-sore in fever is often one of the group of secondary affections analogous to the ulceration, or to the tumefaction and ulceration, of the glands of the intestine—analogous to the bronchial affection which occurs in the middle stages of the disease,—analogous to the other secondary organic diseases of fever. And if analogous to them, it should be more or less observed to be under the law of periodicity; it should appear at a certain time, and it should disappear at a certain time, or, at least, exhibit a tendency to do so. We have observed this very curious fact. There are cases in which the system seems to be in a state that bed-sores will form from the slightest possible causes, that is to say, that whenever there is any irritation or any pressure, no matter how slight, a bed-sore will form in any part of the body. Some years ago we had a patient in this hospital, who, after the 12th day, showed this tendency to bed-sores. She had bed-sores on the nates, and one on each shoulder. Then the tendency to the multiplication of these bed-sores increased, and every morning two or three new local diseases of this kind were discovered. Wherever there was the slightest possible pressure, we found a gangrenous spot; in the fold of the arm, in the fold of the pectoral muscle, where the mamma leant upon the arm, where the head leant upon the hand in sleep, the mark of a black hand was stamped upon the face,—where one leg lay on the other,—in every possible position in which anything like pressure was made, or irritation excited, there were bed-sores; and this went on repeating itself, day after day, up to a certain day, until there were about thirty sloughs in different parts of the body; and from that day,—I might say from an hour of that day,—no more bed-sores formed, and the patient then had to go through the process of throwing off all those sloughs, the granulation of the cavities from below, and their cicatrization. She was kept lying on her face for upwards of a month, and finally recovered.

Now, what I want to draw your attention to in the case of Hardcastle is, that this extraordinary eruption of gangrenous patches on his back is not of the nature of bed-sores in the ordinary sense of the word. These patches are not produced by pressure. We find them in great abundance in the hollow of the back, where pressure is relieved by the pelvis and by the shoulders. We find them in abundance in the interscapular region; but if we wanted additional proof, it is this,—that we find them on the anterior portion of the thorax. They came out as vesicles. These vesicles became hard at the top, then black, and soon the mass dropped out; and this patient's back is now as if you took a sharp gouge and punched out circular portions of the flesh in a vast number of spots. Now, it can be hardly doubted, that this singular appearance is simply an example of a secondary disease affecting the surface; and it is very remarkable that it should have appeared on one of the critical days—upon the day when, in the ordinary course of fever, the disease should have subsided. And it strengthens greatly the opinion, that not only the general disease is under the law of periodicity, but that the secondary alterations are so too.

As a general rule, gentlemen, in prognosis, the occurrence of any vesicular eruption whatsoever in fever is bad. We have in fever several forms of vesicular eruptions. But, suppose a patient in the eighth or tenth day of fever, when he is otherwise going on well, you take his hand to feel his pulse, and you are surprised at seeing a vesicle upon his arm. Do not neglect that—do not overlook it. The mere circumstance of that solitary vesicle forming so silently, without any pain, without any notice, points out that there is mischief before you—that the case is likely to go wrong. It is a very important prognostic. Here we have on this patient an eruption of vesicles running rapidly to deep gangrenous destruction of the part, for some of the cavities formed by them are singularly deep, though circumscribed. Now, suppose that in place of that disease attacking the skin, upon the fourteenth day, on the tenth day, or whatever day you please, in any case, a similar condition should attack the intestine. Suppose that the typhoid matter suddenly infiltrated a gland in the intestine, and that that should fall as suddenly to gangrene, and that there was a solution of continuity; you will at once see the progress of the worst form of the typhoid secondary disease of the intestine. You may look on this man as at this moment turned inside out, and that on the surface of his skin you are able to learn the history of the worst form of the typhoid ulceration of the intestine. This extraordinary condition of his surface no one will say is inflammation of his skin. Apply the same view, and will you say, that the disease of the intestine is inflammation of the intestine? Certainly not. Whether this man is to live, gentlemen, or to die, I believe none of us can venture to say. Of course, the chances are enormously against him; but, in the treatment of fever, you are never to despair so long as the patient can swallow. So long as he is able to take nourishment, so long as he is able to swallow wine, no matter how dreadful or apparently hopeless the symptoms may be, you are not to desert him, but—to use the phrase of our glorious sailors—you are to fight the ship while she swims. In a disease under the mysterious law of periodicity, every hour of compelled life is a clear gain. And, over and over again, you will find that your efforts will be crowned with success. You will see a patient lying with his back icy cold; you will see him pulseless,—his lungs filled up with secretion,—his belly tympanitic,—with dreadful diarrhœa,—the lower extremities gangrenous,—himself in a state of insensibility,—and yet, even under those circumstances, a recovery is possible. But that recovery can only be effected by the steadfast determination of the Physician not desert his post until the vital spark has actually fled; and, if you commit an error in holding on,—in hoping against hope,—at all events it is an error on the right side.

LECTURE V.

With reference to the case of Hardcastle, with which we were occupied at our last lecture, we may hope that the symptoms have at last yielded. The great interest of this case consists in its having been an example of a fever in which the patient was scarcely maculated yet in which the stimulating treatment had to be pursued with an activity as great or greater than that which we are called on to employ in the worst cases of spotted typhus.

On looking over the notes of the case, I find that on his admission, which was on or about the seventh day, he had a few scattered maculæ on the abdomen, of a large size, and of a leaden gray colour. He then had diarrhœa, abdominal tenderness, and ileo-cœcal gurgling; and the sounds of the heart, though weak, preserved their natural mutual relations as to force and duration. Doubtless the patient at this period might have been well described as labouring under typhoid and not typhus fever, according to the distinctions now in vogue; but on the 14th, or the 21st, or the 24th day, he would be a bold man who would declare that the case was not typhus of the worst description. He is now at the 28th or 30th day of his illness, and we have every reason to believe that all will now go well. Since the eruption of gangrenous vesicles or pustules, which occurred on the 21st day, there have been no new appearances of this form of disease, there has been no new bedsore, nor have the gangrenous patches spread as might have been expected; two of them are in the form of sinuous cavities, but even these show signs of healing. These sores on the back were treated first, you will remember, by the simple and afterwards by the fermenting poultice; but as the latter gave considerable pain, the nurse returned to the simple poulticing, and now, under the advice of my colleague, Mr. Smyly, we have changed our plan, and are using stimulating dressings to the ulcerated surfaces. In the management of these sores, whether they be the ordinary bedsores or examples of the gangrenous pustules, both of which appear to be of the nature of the genuine secondary affections of typhus under the law of periodicity, it sometimes happens that we have to deal with extensive sinuses. I have seen them sometimes of not less than seven inches in length. In most cases, the best treatment for them will be stimulating injections, using as an apparatus the vulcanized india-rubber bottle with a long and slender ivory pipe; and it is generally requisite at first to wash out the sinus with tepid water, and afterwards to inject some of the metallic solutions—diluted solutions of sulphate of copper, nitrate of silver, or sulphate of zinc; and when the discharge is very fetid, you may use the decoction of bark, or the solutions of chloride of lime or soda. An excellent dressing when the sore is open is the Canada balsam combined with oil, or a mixture of equal parts of castor-oil and balsam of copaiba. You will derive advantage, also, from the employment of pressure by means of flat compresses of lint, and a roller when it is possible to apply it, or in other cases you may employ strapping with adhesive plaster. When the sinus is in a depending position, and matter accumulates in its lower portions, it is sometimes necessary to make a counter opening; but this operation should rather be delayed until the system of the patient has improved; the case is then to be treated as an ordinary surgical case.

Now let me draw your attention to the diligence with which the administration of wine has been pursued in this case. We began the exhibition of wine on the 2nd of November, which was the eighth day of his disease; and, for the next four days, the quantity administered was six ounces daily. The wine used all through was port, of an excellent quality. From the 6th to the 11th he had twelve ounces daily, and from the 11th to the 18th his daily allowance was twenty-four ounces. During the next three days it was reduced to eighteen ounces; and, from the 21st to 26th, to twelve ounces per diem. On the 26th and succeeding days he had ten ounces; on the 28th the quantity was reduced to eight; on the 4th of December he had but four ounces; and the wine was omitted altogether on the 5th. Besides all this, a tumbler of hot brandy punch, containing two ounces of the best brandy, was administered from time to time whenever the patient's state seemed to require it; and in this way he used about twenty-four ounces of brandy, and 438 ounces of wine, and, in addition, bark, musk, and ammonia were freely exhibited.

Some may suppose that this quantity of wine was excessive. Such is not my opinion, nor will it be yours when you come to treat the typhus of this country in a large hospital. I am sure we might have given him with safety much more, and I doubt if we could have done with less. And the result of the case confirms what I have said to you before, that in a case of fever, no matter how terrible the group of symptoms may be, you are not to despair so long as the patient can swallow. Bear in mind, too, that all through, Hardcastle has been carefully fed with chicken broth, beef-tea, and jelly; and we have now passed that period when, under the law of periodicity, his terrible disease will subside.

This case brings to my recollection two remarkable instances in which an extremely bold use of stimulants was the means of saving life. Both were cases of most malignant typhus, and in both instances the patients were medical men. In the first, we administered more than two dozen of wine, of which six bottles were champagne; and besides this, the patient had not less than six bottles of brandy. His fever did not pass the twenty-first day; it was, therefore, at least ten days shorter than that of Hardcastle's, so that the stimulants were not only in greater quantity, but exhibited within shorter intervals of time. The symptoms in this case were the most extreme adynamia, continued coma, persistent coldness of the breath, enormous vibices, and a general purplish black colour of the skin. We could discover no local lesion: the recovery was perfect, and the gentleman has now remained for many years in excellent health. He was a man of very temperate habits. In the second case, on about the twelfth day of the fever, I was called to see the patient; he had got no stimulants. The nervous system was free, the surface was cold, and the pulse almost imperceptible; the integuments of the lower extremities, from the middle of the calf downwards, were black, and hung in loose wrinkles on the limbs. This patient swallowed about sixteen ounces of brandy in the course of a few hours; reaction was established, and the case did well. We expected extensive mortification in the legs, but within four-and-twenty hours from the commencement of the exhibition of stimulants we found that the circulation was fully re-established, the extensive blackness had disappeared, the limbs had recovered their fulness, and the subsequent loss of integument, which occurred only in the feet, was very trifling. In this case there was a petechial eruption, approaching to purpura; but although it is generally true that stimulants are more often called for in the maculated than in the non-maculated cases of fever in this country, yet you must bear in mind, that as in the case of Hardcastle, you will meet with a typhoid fever, if you choose to call it so, in which the most energetic stimulation is required. I have given an example of this in my paper on the State of the Heart in Typhus Fever, in Vol. XV. of the *Dublin Medical Journal* (First Series). The patient used 292 ounces of wine, 20 ounces of brandy, 7 bottles of porter, and had besides various medicinal stimuli and abundance of food. The principal symptoms were extraordinary prostration, coldness of the surface, and feebleness and irregularity of the heart's action; and it was not until the end of the eighth day of the exhibition of stimulants in great quantities that any favourable influence was produced in the circulation; and the case strongly illustrates the advantage of persisting in the use of stimulants, although for days together no amendment seems to follow their employment.

I have sometimes observed that students were under a misapprehension about the doctrines which we have long held in the hospital with respect to the condition of the heart as a guide for the use of wine. They have come to the erroneous opinion that we are only to give wine where we find the want of the first sound of the heart, and that we are not to give wine where the heart is acting well. This is a mistaken view of the matter. What we have established as to the state of the heart in connexion with the effect of stimulants, is simply this,—we have ascertained that the efficacy of stimulants is often directly as the debility of the heart. It has been also ascertained that the power of bearing stimulants, their effect upon the nervous system, their good effects on the general condition, are directly as the weakness of the heart. We may lay down as a rule, that there are three conditions of the heart to be looked at by the practical man in the treatment of fever. In one we have an excited heart—a violently excited heart all through the case; and this heart may be excited and violent, although the symptoms be those of extreme adynamia, although the surface be cold, the breath cold, and the pulse so feeble that it cannot be discovered. Nay, the heart may act with great force for several days, and yet there be no pulse at the wrist. This is one case. In the next case, we find exactly an opposite condition, in which the systolic force of the heart is diminished. This is shown by loss of impulse of the heart, by diminution of the first sound, and, in certain cases, by extinction of the first sound of the heart while the second remains. This is a case which calls for wine, and in which you should give it: it is a case in which in the vast majority of instances, wine will agree with the patient. There is a third set of cases in which the heart does not seem to be implicated at all in the course of the disease, in which, notwithstanding the existence of the most extraordinary group of symptoms affecting various organs, the heart, in the middle of the storm, seems to be in a state of calm and quiet. If we compare these three sets of cases with a view to prognosis, we may arrange them in this way. The case of excited heart all through, with feeble pulse and with adynamia, is unquestionably the worst case. There is no worse symptom in fever than an excited heart. It is especially a bad symptom when, with that excitement, we find a feeble pulse. The next will be the case of sinking of the heart; and the most favourable case is that in which, as I said before, the heart seems to escape disease. But you are not to suppose, that because you have an excited heart you are not to give wine if the symptoms of the patient require it: and you are not to suppose that, because the heart is not affected at all, you are to withhold wine if the general symptoms of the patient require it. You are not to found your exhibition of wine or stimulants upon any one thing; you are to take the general state of the patient into consideration. What we have done, is to discover an intelligible practical rule which will guide you in the use of wine in certain, I think in many cases; but you are not to suppose that because this man has a clear first sound at his heart, therefore you are not to give wine. You are not to suppose that because the heart is safe you can do without wine.

Now, in the case of Hardcastle, recollect that although his heart seemed to escape, or was at most only feeble through the course of the disease, what frightful adynamia existed; how for day after day the patient's face was Hippocratic, or almost so; how the general character of the disease was that of the most terrible putrescent fever; yet his heart escaped. And here is the result. We have given that man upwards of twenty bottles of wine and twenty-four ounces of brandy, and now, on the twenty-eighth or thirtieth day of the disease, we have the satisfaction of feeling that his case may be set down as among the triumphs of medicine. I wish also strongly to impress on you the great importance of the use of other forms of nourishment in this disease; for we must not only keep up the nervous energy of the system by wine, but we must support nature by food. There is no mistake more fatal in fever than the withholding of food. I was early taught the importance of the use of careful nourishment in fever by my friend and colleague, Dr. Graves. I remember once, Dr. Graves, when speaking of the necessity of the use of nourishment in fever, made use of these words,—"If you are at a loss for an epitaph to be placed on my tomb, here is one for you,—'*He fed fevers.*'" In addition to the prejudices with which the inflammatory doctrine imbued so many minds, with respect to the use of food in fever, there was a new set of arguments raised against it, in consequence of the experiments of an American physician. I allude to the case observed by Dr. Beaumont, and so often quoted since. In this remarkable case, various medicinal substances and articles of food were introduced through an external fistula into the stomach, their effects being noted, as also the conditions of temperature, vascularity, etc. A set of results were subsequently published in connection with the action of the stomach upon food. One of the results stated to have been thus obtained was, that the existence of the state of fever altogether suspended the process of digestion. Here was a statement which had the appearance of being the result of strict observation. It influenced a number of young men; but did it influence those who had once been in charge of a fever hospital? Not at all; because those men knew very well that, no matter what Beaumont might say about the stomach not digesting when the patient had fever, in thousands of cases patients in fever digested remarkably well, required food, and derived benefit from it. In a large number of cases of typhus fever, the stomach has an excellent power of digestion; and, I believe, if we were bold enough, we would find that many articles of food usually forbidden to fever patients might be given to them with safety. A curious incident was related to me which shows that the stomach in fever is capable of digesting even a rather coarse article of food. A lady who had been recently married was attacked with extremely severe petechial fever; she was covered with dark-coloured maculæ, and the disease had run to about the twelfth or thirteenth day. She was attended by several eminent physicians. Her case was an extremely bad one, and her life was all but despaired of. She was violently delirious. Her husband had occasion to leave the house on some business. At the period of the dinner-hour of the family, the servants were cooking a rump of beef and cabbage, and the odour of it filled the house. In her delirium, she called for some of the beef and cabbage; she was then, you must understand, in severe fever, and covered with maculæ. Her sister, who was attending her, believing she was dying, thought it only right to indulge her, from the feeling that it was right to indulge the request of a dying person. She proceeded to the kitchen, and, as soon as the beef was boiled, cut a very large mess of beef and cabbage; and this was brought up smoking hot to the lady's bedside, when she devoured it with great avidity. Shortly afterwards her husband came in, and was told what had happened. He became terrified, and sent for physicians in every direction. Four or five assembled; time was pressing, and every one agreed that something should be done. At length the late Dr. Harvey, a practical physician of the very first class, arrived. He was laid hold of by the agonised husband, forced up stairs, and his opinion earnestly requested. At that time, the stomach-pump was not in fashion, but every one agreed that something decisive should be done, that an emetic should be given, or some extraordinary effort made to get this mess of beef and cabbage out of the lady's stomach. When Dr. Harvey went to the bedside, he found the patient in a tranquil sleep. He turned round, and when anxiously appealed to what should be done, he said—"You had better wait till she wakens; let her sleep it out." She slept for four or five hours; awoke wonderfully better, and on the following day was out of danger. I do not give you this case to induce you to feed your patients with salt beef and cabbage in fever; but it is very important, as showing that in typhus fever, with maculæ, the stomach is capable not only of digesting such a coarse article of food as salt beef, but that even such food may have a good effect.

II. *Course of Lectures on Hernia.* By Professor MALGAIGNE.

LECTURE III.*

It is generally, though erroneously, believed that the exciting cause of hernia is a muscular effort. I have been particularly struck with this fact in studying the etiology of hernia, that 57 of 310 hernias occurred without any apparent cause, but were examples of what has been called *spontaneous hernia;* the patients did not notice their production, had no recollection of any fall or blow, and were surprised when they found themselves labouring under hernia.

There remain 253 cases in which hernia was the result of muscular exertion of some kind. In 65 subjects the protrusion took place while they were engaged in raising a burthen from the ground. In raising a heavy weight, the legs are separated, in order that the body may be firmly supported, and the abdomen is flexed on the thighs. In this position, the external inguinal rings are more relaxed than in any other, and the contents of the abdomen readily protrude. This is a fact of practical importance, for it suggests to the surgeon that the best method of assuring himself that a truss is properly fitted is to require the patient to cough while in the posture I have just described. In 38 subjects hernia was developed while carrying burthens; in 38, while making exertions with the hands and feet; in 21, while coughing; in 9, on receiving blows on the abdomen; in 2, while vomiting; in 1, on making efforts to urinate; in 62, while making different muscular efforts which can scarcely be classed in categories.

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*See Vol. III, No. i., p. 39, and No. iii., p. 229.

When we come to apply these theoretical ideas we are sorely puzzled; a man, for example, gets a hernia while carrying a burthen, but this man made a violent effort in raising the burthen, another in getting it on his shoulder, and a third in laying it down. What was the precise cause of the hernia, and why it was on one side rather than on the other, it is impossible to say.

I have described, in a general way, the causes of simple hernia; I have not spoken of double hernia. Surgeons who have studied hernias only in respect to their liability to become strangulated, have forgotten to devote a special chapter to double hernia, because it is very rare for two hernias to require an operation simultaneously, yet double hernia is frequent enough to merit attention. It is more common than single hernia. Of 319 hernias which I examined in 1835–36, 133 were single and 186 were double hernias. Of these 186 hernias, 34 were produced simultaneously, either spontaneously or in consequence of a muscular exertion; 8 were of the class improperly called *congenital;* 144 became double by the formation of what I term a *secondary hernia.* Of these only 44 were produced by muscular effort, the 100 others were *spontaneous.*

How are these double hernias occasioned? I am sure I cannot tell. When the cavity of the abdomen is enlarged by the escape of a portion of its contents, on one side, it would seem as though the other side should be more retentive; but the contrary obtains; those who have hernia already are precisely those who are most liable to hernia, since double is more common than single hernia. Shall we seek refuge in the argument that the first hernia was too small? We encounter a pathological preparation in the Musee Dupuytren, presented by Professor Lallemand, and numbered 358, which answers this objection. On the right side there exists an inguinal hernia comprising almost all of the abdominal viscera, and on the left side is another inguinal hernia, of the ordinary size, formed by a loop of intestine.

Let us now turn to the mode of development of hernia. We find that there are two great categories: hernias of infancy, which may be termed, if you will, *hernias with an open canal,* and hernias of adult life or of old age, which may be termed, *hernias with a closed canal.*

Sir Astley Cooper has denominated those hernias which are incorrectly termed congenital, hernias into the tunica vaginalis; this distinction is insufficient, for I shall presently describe four varieties of hernia into the tunica vaginalis. According to Scarpa, congenital hernias are those which are formed below the testicle. This is an error; this species of hernia is one of the rarest; when I was lecturing on hernia at the *Bureau Central*, two months would sometimes elapse before I could exhibit an example of it to my class. I call this species *testicular vaginal hernia.* In the majority of cases in which hernia is developed in early infancy, the process of obliteration has already commenced in the inguinal canal; a constriction has occurred above the testicle. Here the intestine is arrested; it is almost always above the testicle and in contact with the cord. I call this species *funicular vaginal hernia.*

Sir Astley Cooper gives a species of hernia, which he calls *encysted vaginal hernia.* After opening the sac of these hernias, we find another closed sac. These are nothing but funicular hernias, which being pushed downwards by new efforts, have doubled the tunica vaginalis, one portion of which encloses the testicle and the other the cord.

Here, then, are two important varieties of hernia in which the testicle has descended into the scrotum; there are two other varieties in which the testicle is still in the abdomen. In the one, a hernia presents at the external ring in relation with the testicle, and inflames the testicle by its pressure. If, under these circumstances we apply a pad, we compress the testicle; if we refrain from doing so we allow the hernia to descend. I call this species *testicular hernia.*

When the testicle is still in the ring, funicular hernia is rare. The sudden descent of the testicle is not always a cause of hernia; I have seen a boy at the swimming school fall violently upon his abdomen on the water; his testicle descended suddenly into the tumefied scrotum, but no hernia was produced; the inguinal canal was immediately obliterated.

Another species of hernia with the testicle in the abdomen is possible. I have seen a subject in whom the tunica vaginalis extended into the perineum; if a hernia had occurred in this case its anatomy would have been peculiar. This would form a possible variety of hernia, I say, although I have never seen an example of it.

Let us now briefly review the conclusions at which we have arrived:

1. Hernia is sometimes simultaneously developed on both sides, without any apparent predisposing cause.

2. Hernia of the right side is twice as common as hernia of the left side.

3. In infants this predisposition depends on the non-obliteration of the inguinal canal.

4. In the two subsequent periods of life, it depends on the predominance of muscular action on the right side.

5. The exciting causes of primary and secondary hernia are different. About one sixth of the whole number of primary hernias occur without any assignable cause, and are termed *spontaneous hernias;* in secondary hernias, however, the proportion of spontaneous hernias is as two to

one. Secondary hernia is usually developed in the course of the six years succeeding the development of the primary hernia, although even after the lapse of this period the patient is not completely secure from secondary hernia. These laws, let it be understood, only regard those cases of secondary hernia in which the primary protrusion is only imperfectly retained, or is not retained at all; I believe that a properly retained primary hernia affords almost complete security against the development of secondary hernia.

As to the development of hernia, we have seen that there were *hernias with an open canal* and *hernias with a closed canal;* we then distinguished two classes of hernia occurring after the descent of the testicle, *funicular* and *testicular vaginal hernias*, and two classes occurring when the testicle occupies the abdominal cavity, according as the hernia rests on the testicle or extends below it. Hernia is developed very slowly when the testicle has not descended; the peritoneal *glove-finger* or the inguinal canal forming gradually under the influence of the muscular efforts of the patient.

Let us now examine into the consequences of a hernia which is not retained. Such a lesion re-acts on the whole economy. A hernia which descends into the tunica vaginalis atrophies the testicle, unless it is supported. I mention this fact particularly, because M. Follin, in his excellent essay on atrophy of the testicle has omitted this important point in its etiology. The testicle is atrophied, then, from this cause, and, if double hernia exists, both testicles waste away. I have seen a man of 26 years, labouring under an inguinal hernia which had never been maintained in reduction by a truss, whose testicle was no larger than a bean. This was not of so much importance, however, for there was a good testicle on the other side; but I have known a man of 40 years affected with double hernia, whose testicles were no larger than peas; his voice was shrill, he was beardless, and although he was of fine stature and handsome appearance, he was no better than one of the *Castrati* who sing in Italy. Such cases, however, are rare.

When a hernia presents itself at the external ring in company with the testicle, the case is most perplexing. If let alone, the testicle is inevitably atrophied; if a bandage is applied, it is atrophied the faster, and is constantly subjected to a cause of irritation and inflammation; if the testicle is pushed back into the abdomen it is still compressed. What is to be done in such a case? Surgeons have never satisfactorily solved this problem. I think that it may be laid down as a general rule that when the testicle and a hernia simultaneously present at the external ring, we should direct our attention to the generative organ. We should endeavour above all things to induce the descent of the testis. We should induce the patient to jump and ride and take violent exercise. The testicle in its descent will drag the hernia with it. We should not be alarmed at the idea of strangulation; strangulation very rarely occurs in these cases, all that has been said to the contrary notwithstanding.

There is another state of things which occurs when there exists a *funicular hernia,* and the descent of the testicle is not complete. Sometimes pressure will suffice to complete the descent of the testicle. If this can be accomplished, it will be proper to reduce the hernia and apply a truss; but if the testicle is near the ring, the slightest effort will cause the cremaster muscle to contract and bring the testis in collision with the pad. In such cases it is better to look after the safety of the testis, and to let the hernia alone.

The diagnosis of *hernia with an open canal* is not always easy. When the testicle has descended, both testicular and funicular vaginal hernia is readily recognized in a young person by the rapid descent of the protrusion, and when the testicle is engaged in the canal, the diagnosis is also evident; but in the aged, if the patient has not noted the exact time at which the hernia was developed, it is easy to confound vaginal hernia with a protrusion into the non-obliterated sac of an old hernia.

Hernia with a closed canal cannot occur thus suddenly in an adult, or become strangulated at the moment of its formation, and I feel confident that all the cases of this sort which have been adduced are false.

Let us examine this law, which has no exception that I know of, viz:—that *inguinal hernia with a closed canal never extends suddenly beyond the external ring.*

Until the beginning of the nineteenth century, surgeons believed that inguinal hernia took place through a single ring; they admitted no barrier to its production but the peritonæum and cellular tissue behind the ring of the great oblique muscle; and, consequently, they were ignorant of the two periods in the development of hernia. Sir Astley Cooper was the first who demonstrated that inguinal hernia took place through a canal with two rings, the one internal or abdominal, the other external or inguinal. Between these two rings is the inguinal canal, that glove-finger or process of peritonæum with which the testis is enveloped in its descent to the scrotum.

When a hernial protrusion commences, it pushes the peritonæum into the internal ring or opening in the transversalis fascia; from this moment there is an hernia; what I call an *hernial point.* This is the *first degree* of hernia; the bowel or omentum has pushed forwards the peritonæum and broken through the cellular tissue which unites the cord and its sheath to the inguinal canal; it has cleared the inner ring, and enters on the canal.

If the hernia progresses, it can be felt from the external ring; it fills the inguinal canal; it is called *interparietal* or *interstitial hernia.* This is the *second degree* of hernia; it is frequent, for all fully formed hernias pass through this stage. M. Goyrand was the first to describe it, having operated in a case of strangulation in the canal. In 1834 few surgeons were acquainted with this form of hernia.

When the protrusion passes the external ring and protrudes in the groin, it is called *bubonocele.* This is the *third degree* of inguinal hernia. When it invades the scrotum, it is termed *oschocele,* or *scrotal hernia;* this is its *fourth degree.*

When we study the progress of slow spontaneous hernia in the living subject, we find that *hernial points* are very common. I examined a thousand old men at the Bicêtre, and detected upwards of one hundred incipient hernias. The old surgeons disregarded this first degree of hernia, for hernial points never become strangulated, and patients never consult the truss-maker on account of them; but a knowledge of their existence is most important, for if a hernial point is properly retained by a pad there is no further danger; there is on the contrary, a strong probability of a radical cure.

In hernias which are developed suddenly, and which descend at once to the scrotum, things occur differently. I have carefully examined numerous patients on this point. One will say: At such an hour, in lifting a weight, in making an effort, I felt something give way. Sometimes this is all; the patient looks at his abdomen, sees nothing wrong, and resumes his work. Another patient experiences pain and the sense of rupture at the same moment; the pain subsides, and he thinks no more of it. But there are others in whom the pain continues, and who are forced to take to their beds. I have seen one patient who was not free from pain until he had lain in bed three weeks. This is what takes place at the moment of the effort, but the hernia rarely presents at the external ring before one two days have elapsed, and another effort, and a second rupture often occurs before the hernia is fully formed. In some subjects, however, the barrier is overcome at once, and there only remains the cellular tissue which doubles the peritonæum to be forced away and in this case the hernia is developed rapidly.

Anatomy explains this slowness in the production of hernia. Without a preliminary process, it is impossible for the bowel to detach the spermatic cord from its adhesions to the transversalis fascia, to rupture the cellular tissue, to dilate the inguinal canal and separate the pillars of the external ring. An hernia with a closed canal cannot be developed rapidly, nor become strangulated suddenly. Whenever you see accounts of such cases, be sure that they refer in reality to hernia into the tunica vaginalis, or into the non-obliterated sac of some antecedent protrusion. Inguinal hernia, then, passes through four stages: *hernial point*, *inter-parietal hernia*, *bubonocele* and *oscheocele.* When the protrusion has fairly reached the scrotum, it may attain immense bulk. I have seen one which reached quite to the knees. Whenever patients have a clear recollection of the progress of their hernia, they will tell you that it did not protrude suddenly even as far as the external ring.

When a patient comes to you with a large hernia which has not been maintained in reduction, rely upon it that you will find an incipient hernia on the other side. To discover whether there exists an incipient hernia, the majority of surgeons and truss-makers apply the finger to the inguinal canal and direct the patient to cough. This is a poor method. The first two degrees of hernia cannot be detected in this way. It is no proof that there is hernia when the finger feels an impulse when the patient coughs. The finger applied to any part of the abdominal parieties will receive an impulse under these circumstances.

We cannot detect hernial points with the finger. The patient must be placed in a strong light, and the abdomen must be examined in profile when he coughs. If we observe in a single point of the abdomen, about one inch upwards and outwards from the external ring, that a slight abdominal prominence is developed, then an hernial point exists. When the hernia is engaged in the canal, it *may* be felt with the finger. Something may be felt gliding under the finger, or the hernia may slip back, giving the sensation of *glore-glore.* So much for the diagnosis of *interparietal hernia.*

The diagnosis of *bubonocele,* when uncomplicated, is very simple. There is an ovoid tumour at the external ring, which, when pressed upon, returns into the abdomen with a sudden jerk, and perhaps a gurgling noise.

Hernia does not reach its fourth period in every subject. In some it remains in the canal, the external ring being apparently too small to give it exit. It may even acquire the size of the fist and still remain in the canal. I attended a Sacristan at Saint Sulpice who had two inguinal hernias of this size, neither of which had emerged from the external ring.

Let us now examine the effects of hernia on the neighbouring parts.

The hernia dilates the inguinal canal; it separates the cellular tissue which unites the cord to the walls of this canal; the cord descends behind the peritonæum, the hernia is placed before it, and consequently is found anterior to the cord; such is the regular order of things; therefore you are told that in the operation for hernia, after dividing all the external envelopes, you will come last to the hernial sac. But, in certain cases, surgeons have found the veins and arteries of the cord and even the vas deferens under the edge of the knife; the hernia being surrounded by the component parts of the cord. This state of things is due to the long sojourn of the hernia in the canal; it pushes every obstacle to the right or left, it separates the spermatic vessels, and forces itself into the centre of the cord. This is the theory of the disintegration of the cord.

An hernia has some effect on the cord apart from producing this rare state of things. In scrotal hernia of long standing, the cord is often swollen with a kind of lymph, with a fibro-plastic tissue which does not degenerate. Sometimes we meet with a varicocele, which reaches the size of the fist, even, when the hernia is compressed. There may be chronic induration of the cellular tissue of the cord, but, most commonly, adipose tissue is deposited around it. I have rarely known hernia of infancy or adult life to cause atrophy of the testicle, but the testicle and the epididymis, too, is often engorged. It is not unusual, especially in aged men, for hydrocele to supervene on hernia. Is this an effect of compression of the spermatic veins (you know that M. Bouillaud considers the compression of veins the usual cause of dropsies,) or is it due to the swelling of the testicle? I do not know, but I have seen fifteen cases of hydrocele in which hernia preceded the effusion.

As to the scrotum, it becomes thickened and indurated, and lined with fat; the raphe is obliterated. Sometimes the skin of the scrotum is so distended by an hernia that it can stretch no more, and the hernia is invested with integument borrowed from the abdomen and thighs. This is easily recognized, for the skin of the thighs and abdomen is lighter and softer than that of the scrotum, and lacks the transverse ridges which are formed on the latter by the action of the cremaster, dartos? (TRANS.)

(*To be Continued.*)

CHRONICLE OF MEDICAL SCIENCE.

ANATOMY AND PHYSIOLOGY.

1. *The Abnormal Anatomy of the Arm.*

A very interesting and elaborate report on the anatomical variations met with in the dissection of the arm, from the pen of Mr. John Struther, of Edinburgh, and published in the *British and Foreign Medico Chirurgical Review,* gives us some statistics on the relative frequency of the high division of the brachial artery, and presents some interesting practical questions for the consideration of the surgeon.

The relative frequency of the high division of the brachial artery was very elaborately ascertained by the careful and extended observations of Mr. Quain in his work on the anatomy of the arteries. From the observation of 481 arms, he has shown that the proportion of cases in which two arteries exist in the arm is one in 5 1-9. The previous examination of Harrison, from the observation of 84 cases, gave a proportion of one in four. Adding together the conclusions of Harrison and Quain, the proportion will stand about one in five.

The frequency of this abnormal variation being thus proven, the important practical question comes to be, supposing a second artery to be present, how is its existence to be ascertained and how can it be reached?

An accurate dissection of twenty arms by Mr. Struther who noted the exact position of the two vessels, enables him to draw the following conclusions:

In a preliminary examination of the arm, the existence of two arteries may be ascertained by the pulsation, or it may be visible in an emaciated person. If no such information can be obtained, and if the first artery met with is not unusually small, and the ligature of it arrests the pulsation or bleeding below, there is no necessity for making further search. If otherwise, another vessel must be sought for. The artery first met with will, in all probability, be the more superficial. If it is in the upper half of the arm, the other artery will be readily found a little deeper, separated only by the median nerve and a layer of fascia, either directly behind or close to one side of the first.

It has been recommended in the case of two arteries being met with, to secure that one only which is connected with the aneurism or bleeding vessel, but it is evident that there can be no greater danger to the vitality of the fingers from tying two arteries in a high-division than in tying the one artery when single, and various good reasons might be assigned for the rule to secure both. This rule may, however, be departed from in the case of false aneurism and wound. These being the chief conditions requiring an operation in the lower part of the arm, it is often not necessary to look for the other artery; but it is observable that the anatomical investigations of Mr. Struther show that these will not be always very easily discovered. It is often concealed by fleshy fibres from the brachialis anticus and generally is bound down upon that muscle by a deeper aponeurosis. The median nerve is now over it, but to its inner side; and the artery and nerve are often removed towards the inter-muscular septum, so that the artery will be found not only deeper beneath muscular or aponeurotic fibres, but in some part of the space between the inner edge of the biceps and the intermuscular septum.

2. *A New Theory of Animal Heat.*

At a late meeting of the Physiological Society of London, Dr. Winn read a paper on "*The Elasticity of Arteries considered as a Cause of Animal Heat,*" and presented a series of experiments made by him with the view of proving the theory.

He states that about seventeen years ago, whilst experimenting with caoutchouc, he was struck with the property which that substance possessed of evolving heat when suddenly elongated, and was led to infer the probability of other bodies being similarly endowed. The elastic coat of arteries, especially, appeared to be one of the substances likely to exhibit the califactory principle, and in the event of this being the case, it would not be unreasonable to infer that the incessant contractions and dilatations of the arteries during life must form an efficient cause of animal heat.

The following experiments made with portions of the aorta of a bullock, somewhat verify the conjecture, and are, at any rate, worthy of notice:

Having cut off a circular portion of the descending aorta, an inch in length, he laid it open, and removed its external and internal covering. He then pulled it to and fro, with a continuous jerking motion, (in imitation of the cystole and diastole of the heart,) for one minute. He then placed in it the bulb of a thermometer, and found that the mercury had risen *two degrees*. To be certain that the increased heat did not arise from any source, he took the precaution of wrapping his finger with a double fold of flannel in order to prevent a communication of heat from the body. He also covered his mouth with a handkerchief, to guard against the warm breath affecting the experiment. There was no fire in the room, the temperature being 36°.

The principal difficulty in this investigation appears to be the moisture of the artery, which, by its evaporation, had a tendency to carry off a portion of the heat. By carefully drying it with a cloth, however, this impediment was partially removed.

His attention was often arrested during the experiment, by other mechanical analogies between the elastic coat of arteries and caoutchouc. They both would bear elongation to twice their length and would return to their usual dimensions with considerable force and the same snapping sound.

From the preceding observations, Dr. Winn concluded that the generation of animal heat could be satisfactorily explained. Physiologists had proved that a certain portion of animal heat was the result of chemical changes in the blood. Yet they confessed that a residuum of heat could not be thus accounted for, and Dr. Winn proposes to refer this residuum to the mechanical action of the arteries. Although difficult to measure the exact amount given during each arterial beat, yet if the development of only a small quantity was admitted, it necessarily followed from the incessant action of the arteries, that the body, unless cooled by the functions of the skin and lungs, would soon become preternaturally hot.

Dr. Winn presents the following physiological and pathological facts as corroborative of this theory:

1st. The minute distribution of the arteries to every part of the system, thus ensuring an equal distribution of heat. 2nd. The *rigidity* of the arterial system, in old age, as being the probable cause of the diminution of animal heat. 3rd. The increased warmth of the body after exercise seemed to be explicable upon the principle of the increased force of the arteries. 4th. When there existed any arterial excitement, and especially if the functions of the lungs (or skin) were at fault, the heat of the body would be greatly increased. 5th. Medicines which reduced the force of the heart and arteries diminished animal heat. 6th. The heat of local inflammations when there was no constitutional disturbance, could only be accounted for in this way, as the arteries in the neighborhood of the disease would be throbbing violently, whereas the capillaries which are supposed to play so important a part in the chemical theory are generally considered to have their action impeded.—*Condensed from the London Lancet.*

MATERIA MEDICA AND PHARMACY.

1. *Medical Uses of Spurge.*

Two species of spurge, *Euphorbia Corollata* and *E. Ipecacuanha*, are mentioned in the secondary list of the U. S. Pharmacopœia, but they are not very highly recommended. It is probable that a third species, *E. Lathyris*, commonly employed in Europe, is better adapted for medicinal purposes.

This biennial plant, known as the *Mole-tree* or *Caper-spurge*, grows wild in this country, in the vicinity of cultivated grounds, and flowers from July to September.* Drs. Wood and Bache give an account of the fixed oil which is obtained from the seeds of this species of spurge in the appendix to their dispensatory. (U. S. *Dis.* p. 1360). It is asserted that when this oil is mixed with boiling water slightly acidulated with sulphuric acid, its active principle is removed, and it becomes a useful alimentary substance. (*Jour. de Chimie Méd.*, T. III.)

The oil of spurge was first submitted to clinical experiment in Italy. Dr. Calderini, of Milan, found that, in the dose of four drops, it promptly caused abundant alvine evacuations, without colic or tenesmus. In larger doses, it directly exhausted the vascular system. (*Dieu Traité de Matiére Médicale.*)

In France, it has been found that in doses of from 3 to 6 drops, this oil produces copious dejections, unaccompanied by gastric or intestinal irritation. It is only when it is rancid that it produces vomiting. Martin Solon administered it with success in many cases of chronic albuminuria; Dr. Cazin uses a mixture of olive oil and oil of euphorbia as a substitute for castor oil.

The *Mole-tree* contains a milky, acrid juice, which has been given by a German physician, Dr. Klebe, in cases of chronic icterus, with the most satisfactory results. Externally the oil of the seeds of spurge, and the gum-resin formed by its concrete juice are useful as epispastics.

Dr. Dieu regrets that oil of spurge is not more generally employed, "as its moderate price enables a patient to procure a satisfactory purgation for quarter of a centime," (one-twentieth of a cent).

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* *E. Lathyris. Catapuce, Mole-tree*, of the dodecandria trigynia, of Linnæus, of the euphorbiaciæ of Jussien. *Root* fibrous; *stem* 2 to 3 feet high, erect. stout, smooth; *leaves* opposite, sessile, lance-linear, acute, entire, glabrous, numerous, and arranged in 4 rows on stem; *flowers* (10 or 20 male and 1 female) yellowish, included in a caliciform involucrum; *glands of the involucrum*, lunate, two-horned, horns dilated and obtuse; *ovary* free, trilocular; *styles* (3) bifid; *fruit* capsular; seeds large, rough, ovoid, truncated at base.

2. *Extract of Beef's Blood.*

Our readers are aware that raw meat and the fresh blood of the beef has been frequently employed, during the last few years,† as a remedy in the diarrhœa of infants and the debility of chlorotic or hæmoptysic adults. From the *Union Médicale*, for May 30th, we learn that Prof. Mauthner, of Vienna, is in the habit of using a somewhat similar remedy. The fresh blood of the beef is passed through a sieve, and then evaporated to dryness over a water bath. The pulverized residue contains, according to Redtenbacher, all of the elements of blood, with the exception of the water. In doses of from twenty grains to six drachms, it constitutes one of the best restorative tonics known. It is supported by the weakest stomach, and is soluble in the gastric juices. Children take it without repugnance. It discolours the alvine evacuations, like the preparations of iron. It should be evaporated very slowly, and carbonization should be avoided; moreover, it should be frequently made afresh.

3. *Antimoniate of Quinine.* By Dr. La Camera, of Naples.

In a late number of the Italian journal, *Ilfiliatre Medico*, an account is given of numerous clinical experiments with a new febrifuge salt of quinine, to which Dr. La Camera, who introduces it, assigns a high place among the anti-periodics.

The *Bulletin de Thérapeutique*, in commenting on this article, cites twelve cases of intermittent fever, either tertian or quotidian in type, which were treated by this salt with uniform success by Dr. Montiero and others, and concludes, with the author, that this remedy deserves farther trials.

The antimoniate of quinine is supposed to combine the resolvent and diaphoretic properties of the preparations of antimony and the virtues of the salts of quinine. It may be administered with impunity in cases in which periodicity is doubtful, when remittency is suspected in an apparently continued disease. The dose of antimoniate of quinine is twelve or fifteen grains, administered in broken doses during the interval of remission. The journals we have consulted give no information in regard to the mode of preparation of this medicament. We know, however, that antimonic acid readily combines with alkalies, forming definite compounds, but then these compounds are decomposed by the weakest acids, and we should accordingly infer that the antimoniate of quinine was a very unstable remedy. O.

4. *Pastilles of Calomel.*

M. Biron Devéze, a pharmacien of Paris, recommends (*Séance de l'Acad. de Méd.*, Mai. 9) the following preparation as a simple and agreeable mode of administering calomel.

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† See *Va. Med and Surg. Jour.* vol. I, p. 301.

℞. Mannite, gr. v.
Calomel, gr. j.
Sugar, ʒj.
M. Make five pastilles.

In administering calomel powders to children, it often happens that the greater portion of the medicine is left on the lips of the child or overturned in its struggles. A plan by which a definite quantity of this important remedy may be given with exactness, is not beneath the attention of practitioners.

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *On the Remedial and Anæsthetic Uses of Intense Cold.* By JAMES ARNOTT, M. D., London.

We have lately called our readers' attention to the treatment of cancer by congelation, as proposed by Dr. Arnott,* and we deem the subject sufficiently interesting to make it worthy of a more extended notice.

Dr. Arnott, in the July number of the *Edinburgh Monthly Journal of Medical Science*, gives his experience for some years as to the remedial value of intense cold, and recounts the many forms of disease in the treatment of which he has found this agent useful. He alludes to the prejudices to its employment, and says, that "Dr. Rowley, who in his attack on cow-pox declared, 'that the accounts which he had heard of the terrible effects of communicating the cruel and beastly disease were enough to freeze the soul,' was not probably more horror stricken than some have been by the proposal to freeze the body, 'and the introducer of vaccination was hardly more abused than the proposer of congelation.'" Whether a grateful world will yield to Dr. Arnott a place by the side of the immortal Jenner, is somewhat a matter of doubt at the present.

The remedial virtues derived from the application of moderate degrees of cold, have been long acknowledged, and our author thinks it singular that a more powerful remedial effect should not have been sought for by increasing the dose, or in other words, by employing a lower temperature, just as larger doses of mercury, quinine, tartar emetic, &c., have been appealed to successfully. There is nothing to dread from the use of even the most intense cold, for a moderate length of time. "Because a continued stoppage of the circulation through a limb has occasioned gangrene, it does not follow that it would be dangerous to use the tourniquet in operations."

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* Va. Med. & Surg. Journal, vol. III, No. iii, p. 255.

The frigorific mixture generally employed is composed of powdered ice and salt, applied either immediately to the skin, by means of a net of thin gause, or by allowing them to act through thin bladders or metallic vessels of appropriate form.

Dr. Arnott contends that all acute inflammations of a form sufficiently superficial to allow of their being under the influence of this freezing process, are greatly relieved and oftentimes speedily cured. The amount of pain produced is trifling, and the reaction, though accompanied by redness and some pricking and smarting sensation, is not worthy of serious complaint.

"If the congelation is not to be extensive or long continued, a piece of ice the size of a large orange will be sufficient. This is well powdered and thoroughly mixed with half its weight of common salt. The mixture is then placed in a net about four inches in diameter, and when it begins to dissolve it should be applied. The net should be frequently raised, so as to permit new particles to come in contact with the skin. If the surface is small, a thin copper spoon containing the mixture, or a brass ball of about a pound weight which has been immersed in the freezing mixture, will produce the effect.

The moment this application is made, the skin is benumbed, and complete anæsthesia exists. The contact of the frigorific being continued, the part becomes white in consequence of the arrest of circulation, and if the remedy be pushed still further, the adipose matter under the skin is congealed, and the part becomes hard as well as white. Reaction soon occurs after suspending the application, accompanied with redness and some smarting, but this redness, in the author's opinion, does not indicate an inflammatory action, but the reverse. The tonicity of the small arteries appears to be lessened, and instead of being inflamed, the parts are rendered less liable to inflammation. Parts cut after congelation heal more quickly by the first intention than they otherwise would.

The remedial qualities of intense cold may be described as antiphlogistic, sedative, and specific, and hence will be found useful in inflammatory, painful, and malignant diseases. The circumstance which limits its application is the impossibility of extending its influence beyond a certain extent or depth, although this agency, whether direct or sympathetic, is greater than one would suppose. Dr. Arnott says that congelation has one immense advantage over other powerful remedies of its class; if it does no good, it will do no harm. Who will affirm this of bleeding, mercury, chloroform, arsenic, antimony, opium?

In the year 1849, congelation was employed in nine cases of acute lumbago, with perfect success, at the Brighton Dispensary. The net containing the ice and salt, was passed to and fro over the seat of pain for five minutes. In only two or three cases was it necessary to repeat the application. In chronic rheumatism, the remedy has been found, by Dr. Arnott, equally successful. In acute rheumatism the freezing process at once relieves the pain and local inflammation, and makes the cure speedy and comfortable. Dr. Arnott uses it in ophthalmia, glandular inflammation of the neck and groin, and in all inflammations, especially of tissues or organs near the surface.

Orchitis is a disease especially adapted to its beneficial agency, and urethretis might be brought under its power. Certain acute inflammatory affections of the skin, as erysipelas, eczema and impetigo, are benefitted. Dr. Arnott also enumerates painful nodes, carbuncles, &c., as being relieved by this process, whilst headache, toothache and neuralgic pains are calmed and controlled.

The effects of congelation in cancer, have been alluded to in a former number. Dr. Arnott thinks that when, from its size, the tumour can be thoroughly brought under its influence, it will be cured by it. In all stages, the progress of the disease will be retarded and the pain assuaged. In cancer of the womb, the freezing mixture may be applied by means of the speculum.

It is thought that the frigorific treatment might be useful, applied to the spine in tetanus, or to the scalp in mania, and finally, in two cases of epidemic cholera, Dr. Arnott administered repeated draughts, of a temperature of 25° Fahr., with apparently excellent effect.

The anæsthetic uses of severe cold must be briefly noticed. It is undoubtedly true, that by its application the sensibility of the skin is destroyed, and hence the most painful portion of the operation avoided. "What can be less troublesome," says our author, "in opening an abscess than touching the skin for a moment with a small brass ball immersed for a few minutes in ice and salt;" and even when the operation is too deeply seated to be reached by this agent, the amount of chloroform required would be greatly diminished. These deep-seated operations, however, constitute a small minority, and if the list of recorded deaths from etherization be referred to (now amounting to more than fifty,) it will be found that in three-fourths of that number, complete anæsthesia might have been produced with perfect safety by cold.

2. *Intermittent Fever Cured by Venesection in the Foot.*

Dr. Bruguier has lately published in the *Revue Therapeutique du Midi*, four very remarkable cases of cure of obstinate intermittent fever by bleeding from the foot at the onset of the paroxysm, in which the most rational methods of treatment had been in vain employed. A succinct history of these cases will doubtless be read with interest.

CASE I.—A quartan fever which had lasted for more than a year. After preparing the patient by several days of regimen, a hot pediluvium was ordered, quarter of an hour previous to the time at which it was supposed the paroxysm would recur. As soon as yawning, shivering, and headache came on, a vein was opened in the foot. The chilliness soon diminished. The patient was placed in a warm bed, and plentifully supplied with hot drinks. A gentle warmth came on, and was followed by moderate perspiration. The paroxysm lasted but a short time. The ague did not return.

Case II.—Quartan fever of upwards of a year in duration. Same preparation, same treatment. The hot and cold stages were shorter than in the first case, and the fever did not recur. The phenomena of miasmatic cachexia rapidly disappeared.

Case III.—Quartan fever of eight months standing, with cachexia. Fourteen ounces of blood were taken from a vein in the foot. The succeeding cold stage was short, the fever was less intense, the sweating less profuse. There was no relapse, and the general symptoms rapidly ameliorated.

Case IV.—Quotidian ague of many months duration, intercepted and definitively cured by venesection in the foot, preceded by the indispensable warm foot-bath. O.

OBSTETRICS, &c.

1. *Paralysis Occurring During Gestation and in Child-bed.*

Dr. Churchhill has collected many cases of this affection, and upon their analysis shows: 1. That the hemiplegia, paraplegia, or partial paralysis may occur previous to, during, or sometime after labour. 2. That by some authors, the paralysis, in paraplegia especially, is attributed to pressure on the muscles or nerves, in prolonged labour; but this is denied, as the same disease follows easy labour, or occurs after the lapse of some days. 3. Paralysis may terminate in convulsions, or accompany them. 4. Paralysis may be the consequence of organic disease, or of effusion into or upon the brain or spinal marrow. 5. Paralysis may result from reflex action. 6. The palsy may depend upon temporary causes, and among such causes albuminuria may be included. 7. Hemiplegia may run into apoplexy, or it may pass off in a few weeks, or sometimes more slowly. Paraplegia may leave a temporary or more permanent lameness: the local palsies, (amaurosis, deafness, &c.) generally last but a moderate time. 8. A nervous or hysterical paralysis may occur occasionally in the unimpregnated state, or during pregnancy, but it seldom continues after delivery. Of 34 cases collected, in 22 the attack occurred during pregnancy; in 12 either during or after labour. The largest majority of attacks occurred with the first child.

Seventeen of the 34 were cases of complete hemiplegia, and 1 partial; 4 of paraplegia; 6 of facial paralysis; 5 of amaurosis; 3 of deafness. In the cases of paraplegia the right side was affected in three-fourths of them. Of the 34 cases 4 died.

Of the 22 cases in which paralysis occurred during pregnancy, 12 were examples of hemiplegia; 1 of paraplegia; 4 of facial paralysis; 2 of amaurosis; and 3 of deafness. There is no regularity as to the period of gestation at which the seizure took place, for of 13 cases in which this is mentioned, in 1 it occurred in the 2nd month; in 1 in the 3rd or 4th; in 1 in the 5th; in 1 in the 6th or 7th; in 3 in the 7th; in 2 in the 8th; and in 4 in the 9th; in the latter months it appears are pregnant women most liable to the attack.

Eleven cases out of 19 were cured before or by delivery, and in 8 the disease continued for a longer or shorter time afterwards. The characteristics of the palsy resembled very closely those of similar attacks unconnected with pregnancy; the motor power was enfeebled or altogether lost; in some the sensibility was increased, diminished, or modified. Whenever the secretion was examined, albumen was detected in the urine in all these cases. In the 12 cases in which the attack occurred during or after labour, only 3 were seized in parturition, and of these, 2 followed on convulsions; the others were after labour, and occurred at varying intervals. 1 case occurred 1st day; 1 in 2 days; 1 in 3 days; 1 in 7 days; 3 in 8 days; 1 in 10 days, and 1 one month afterwards. 5 cases were complete hemiplegia; in 1 only the arm was affected; 1 was complete paraplegia; in 1 the right, and in 1 the left leg was only paralysed; 2 were amaurosis; 1 facial paralysis; and in 3 only of the hemiplegia, the face participated in the attack.

In two cases, the attacks seem to have been connected with an anemic condition of the system, consequent upon hemorrhage, either from the direct effect of a deficiency in the circulating fluid or indirectly from the increased susceptibility of the nervous system, under the circumstances, to ordinary exciting causes. In another case paraplegia appeared to result from cold; but in the majority of cases, as I have already observed, there was neither plethora nor anemia; neither exposure, want, injury, nor advanced age, mental distress nor sudden shock; in short, there was no apparent cause.

The cause of these temporary attacks of paralysis must itself be temporary, and since albuminous urine is found associated, some nephritic disorder is conceived to be concerned in their production. The following case, from Dr. Simpson, is advanced as sustaining such a view. A lady had so perfectly recovered after labour as to have been out at church. Seven weeks after delivery, after sudden and anomalous affections of sight and hearing for 30 or 40 hours previously, she was seized with most severe convulsions. Despite of the most free evacuations, &c., they continued to recur from time to time, and proved fatal in 3 hours; the patient during that time never being perfectly sensible. The pelvis of each kidney was filled with whitish, purulent matter, and its mucous lining membrane coated with large patches of adherent coagulable lymph or false membrane; the ventricles of the brain were distended with serous fluid; the urine, when tested, presented no trace of albumen.—*Dublin Quarterly Jour. Med. Science*, May, 1854.

2. *Twins of Different Colour.*

Dr. A. F. Attaway records, in the *South. Med. & Surg. Jour.*, June, 1854, the following interesting case:

Mrs. C——, a white woman, the mother of three children, gave birth to twins, on the 16th of January, an interval of an hour intervening between the births. The first born was very dark, and had every appearance of being of African paternity. Not being willing to suggest such a thing, I tried to explain the matter by attributing the colour to cyanosis. At the expiration of one hour, the second child was born, and had very light-coloured hair, fair skin, and blue eyes, which made the contrast very striking. The condition of the mother and children was such that they required medical treatment for several weeks, during which time, I marked the great difference between the children with peculiar interest. After the recovery of the woman and her children, seeing the African characteristics more and more developed, I asked the mother to give me a correct relation of the circumstances connected with her conception, &c. After some hesitation, she gave me the following history of her case: She said, that five days after the cessation of her last menstruation, she had sexual intercourse with the white man, whom she considered the father of the white child. Three days thereafter, making eight days after menstruation, she cohabited with a negro man, who, she said, was the father of her other child. She assured me that this was the only coitus she had with the negro man for more than one month after she menstruated. If this be true, she conceived at that time. The precise period of her other conception is less definite, in consequence of the fact that she had connection with the father of her white child, at different times, during the month following her last menstruation.

OPHTHALMOLOGY.

1. *Recommendation of an Artificial Cornea as a Substitute for Transplantation of the Cornea.* By Joh. Nep. Nussbaum, Assistant Physician in the General Hospital, München.*

We present our readers with the following abstract of a paper read before the Boston Society for Medical improvement, by Dr. Bethune, in the name of Dr. WALDO J. BURNETT. It may be considered as probably the last intellectual effort of one, who, had he been longer spared, would have played a conspicuous part in the medical literature of America, but whose early death, alas, was chronicled in the last number of this Journal.—[ED.

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* Die Cornea artificialis als Substitut für die Cornea empfohlen. Von Joh. Nep. Nussbaum. z. Z. Assistens Arzte im allgemeinen Krankenhause zu München. From Siebold & Kölliker's Zeitschrift für Wissenschaftliche Zoologie. V. Dec. 1853, p. 179.

Dr. Nussbaum proposes in this article, to introduce an artificial cornea composed of glass, in those cases where there is more or less blindness from opacity of the cornea, and claims to have performed this remarkable feat successfully.

After pointing out the many contingencies for failures attending the practice of Himley, of transplantation of the cornea, he proceeded to experiment on his own person, when he ascertained that glass was the substance which would least irritate the eye, and at the same time might be used as an artificial cornea.

He then, with this fact determined, inserted a circular cornea of glass into the eye of a dog, having previously removed a sufficient portion of the cornea. The artificial cornea was perforated by a hole two-thirds its width. This operation was attended with no success, for independent of the difficulty of removing exactly the proper amount of cornea, there was very great disturbance and inflammation following the introduction of so large a foreign body.

" Thus foiled, he says it all at once flashed upon his mind that an orifice, of the size of a pin-hole, is sufficient to admit a good image of an object, if the eye is placed directly near it ; as, for instance, in looking through such a small hole in a piece of pasteboard. With this valuable hint he made a new trial, forming the artificial cornea after a new model, and of a much smaller size. Its general form was much like that of a shirt stud, there being main shaft with a rim on each end ; but, instead of being round or circular, both shaft and rims were compressed laterally, being, therefore, of an oblong instead of a circular form. The artificial cornea, thus formed and shaped, was not much larger than the head of a large pin, and perforated by a hole of an oblong shape and of a correspondingly minute size. With this new model for a cornea, he proceeded to operate upon the eyes of some puppies. Instead of making a circular incision, as in the first experiments, a simple slit only was here required. In this slit of the cornea, the new body was introduced exactly as a shirt-stud is put in a shirt."

The following is his description of the operation as performed upon a puppy.

" For the operation are required, a cataract knife, a pair of small anatomical forceps, and, for the emergency, Cooper's scissors. In the absence of a good assistant, there is needed a lid-holder of Kelley Snowden, and when the eye is very restless, a sharp hook. For the patient, I choose the reclining, and for the operator the sitting position. The pupil being dilated by a strong solution of the extract of belladonna, I narcotize the eye until the bulb remains quiet ; then, opening the lids by means of a lid-holder I place the cataract knife, which I hold as a pen, at right angles on the surface of the cornea, at about one-eighth of an inch from its external border, with the knife's edge directed towards the inner (not the outer) canthus, whereby both borders of the wound are made of equal thickness. I then plunge the knife into the cornea, until it reaches the anterior chamber; then holding the instrument at a somewhat obtuse angle, I carry it inwards, making an incision one-eighth of an inch in length. The knife is then withdrawn from the wound by carrying it backwards.

"As the wound is small, it gapes open but little, and the aqueous humour flows out very slowly; but quick as possible, I seize the glass cornea with the pincers, and insert it in the incision as a button in button-hole. All this insertion must be done very quickly, for upon the time occupied depends the reaction and disturbance which are to follow. In conclusion, I remove the lid-holder and glue up both eyes.

"The quantity of aqueous humour that escapes during the operation, is in exact ratio with the disturbance and trouble that follow. When little escapes, the iris is little irritated, and the lens but slightly disturbed. In some instances, I was fortunate enough to lose only two drops of the aqueous humour; these cases healed very quickly, and I was convinced that neither iris nor lens had been at all disturbed. In those cases where the incision was too large, and did not hold the glass, the operation proved a failure, and I sealed up the eye, allowed the wound to heal, and afterwards operated again with better success."

The sequelæ of this apparently formidable operation are, according to Nussbaum, but trivial. He says:

"In all cases, there appeared, on the first day, a universal conjunctivitis and a ceratitis, with some disturbance of the cornea; in several cases, an onyx. The former disappear quickly; and the abscess of the cornea heals usually in eight to fourteen days, when the glass, inclosed in an exudation, ceases to be objectionable to the cornea. Iritis I have observed only when the operation was so conducted that much aqueous humour was lost and the lens impinged upon.

"In regard to the appearances in general, my patients seemed as free from pain after the eighth day as before, and the general aspect of the cornea appeared much less disturbed than in those cases where a portion of the cornea was removed, (as in the transplantation of the cornea). The appearance of the eye is not particularly bad; around the glass there is a small, white, opaque circle, to which extend, from the border of the cornea, one or two small bloodvessels. The eye has no irritability, and no photophobia even to glaring light."

Such is a brief abstract of Nussbaum's new operation. As yet, his experiments have only been performed on dogs; but the success he has met with makes him confident of a like result in man.

The artificial cornea should be made with great care, and its size and proportions varied so as to suit the eye destined to receive it. The author recommends rock crystal as the best material out of which this body should be constructed.

These experiments have excited great attention in the locality of their occurrence, and *Von Seibold*, a name well known in science, and one of the editors of the journal in which these facts were first published, carefully examined some of the dogs operated on. He was surprised to find so little irritation from the foreign body. The secretions and motions of the organ were but slightly disturbed.

It may be considered as proven, that a perforated glass body of small size can be thus worn in the eye, but the application of this operation upon man can alone determine the visual relations of this body, and the greater or less degree which its orifice can transmit rays of light for the formation of an image on the retina. Certain it is, however, that the optical principle here adopted is sound in theory.

This paper of Dr. Burnett's was read before the Boston Society for Medical Improvement, and an interesting discussion followed. Dr. BETHUNE recognized the ingenuity of the idea, whilst doubting its practical utility. The aperture which forms the pupil must be made very small in order to retain the aqueous humour and hence a very perfect adjustment is rendered necessary. Dr. Bethune had obtained a very beautiful glass cornea, made by Mr. Griffiths of Roxbury, and intended to make the experiment.

Dr. DURKEE considered the operation as one which might be successful in a surgical point of view, and yet entirely useless to the patient. He feared that the principles of optics would be so much disturbed as to render the result of the operation doubtful. The series of refractions of the rays of light on their passage into the eye would be violated, and hence he doubted whether a distinct image could be thrown upon the expanded retina. Dr. Durkee thought the chances for distinct vision would be better if the cornea was solid, and not tubular, thus substituting the transparent glass for that portion of the opaque cornea removed.

Dr. WILLIAMS made the following remarks relative to the operation:

> "The *Union Medicale*, of Paris, in some of its numbers for January 1854, alludes to the operation proposed by Dr. Nussbaum. The proposition is condemned by the editor in strong terms, and characterized as 'worthy of a German brain.' A subsequent number contains two letters—one from a German physician, who repels the imputation against his countrymen, as entirely too sweeping, but coincides with the editor in his estimate of the value of the experiments made upon animals, and deprecates their repetition upon the human eye—the other letter is from Dr. Deval, of Paris, of some authority in ophthalmic surgery; and contains proof that the plan proposed by Dr. Nussbaum has in it nothing of novelty, as not only had the insertion of an artificial cornea been proposed and practiced upon animals, but the artificial substitute had been made of similar form to that now advocated. Dr. Nussbaum, he shows, has merely revived an operative procedure which had become obsolete. He refers to the discussions to which the subject had given rise in Germany, and states that the experiments on the human eye have been condemned by Dr. Pauli, of Landau, and other distinguished authorities; and further, that Dr. Nussbaum had recently performed his operation on a patient, with no other result than a total failure."

Doctor MORLAND, the Secretary of the Society, cites the authority of Malgaigne[†] to show that Pellier was the first who proposed excision of the cornea and the fitting of a glass within its circumference. Even if the experiment on the healthy eye of animals should be successful, the same could not be predicated, when employed upon the abnormal and diseased eye. If it could be proved that the animal could see, it would not follow that the like result would take place in man.

THERAPEUTICAL RECORD.

Carbuncle.—M. Benavente gives the following plaster as a specific in carbuncular inflammations. We extract from *El Heraldo Medico*, (Med. Times & Gaz.)

The plaster is prepared after this formula.

℞. *Hydr. chlor. corrosiv.*, grs. xv.; *ungt. basilicon*, grs. xxx.; *pulv. scabiosa, hirsuta*, q. s.

It is spread upon linen, and applied to the pustule, beyond the border of which it should extend. It is first well to make a crucial incision into the pustule. Four and twenty hours afterwards the effect is produced, a blank eschar being formed, with the epidermis loosened at the circumference. The author uses it as a remedy in malignant or carcinomatous ulcer.

Cholera.—M. Weber, a surgeon of Trueburg, reports (*Moniteur des Hopitaux*) four cases of cholera in infants, cured by the use of a tablespoonful of the decoction of salep every two hours; every hundred *grammes* of the decoction containing one drop of creosote.—*Medical News & Library.*

Cholera.—Dr. Granich, of Beyrouth (*Revue Medico-Chir. de Malgaigne*) insists on the efficacy of garlic in this opprobrium of medicine. This physician states, with truth, that he has used this remedy "prodigally;" he administers pills of the juice of garlic (*allium sativum*) every half-hour, lavements of the cold infusion of garlic, and directs frictions of the tincture of garlic on the exterior, and cataplasms of garlic to the extremities. This remedy was employed, it is said, with great success by the Jews in Wiesnitz, in 1830.

Coma.—All practitioners are aware of the fatal significance of the coma which often sets in during the third week of typhoid fever. According to Dr. Lebeau (*Arch. Belge de Méd. Milit.*, April, 1854) this dreaded symptom may be overcome three times in four by a blister covering the whole surface of the shaven scalp.

[†] Médicine Opératoire, p. 406, 4th ed. 1843.

Cramps.—Dr. Lobach recommends (*Würtzburg Verhandl.*, Vol. III.) the tincture of the acetate of copper as an efficient remedy in the cramps of pregnant and hysterical women. In the striking case which the author adduces in illustration, the most violent cramps were associated with obstinate vomiting, which had produced great emaciation. The vomiting quickly subsided under the use of six drops of the tincture of nux vomica every two hours. Dr. Lobach has observed, that in all cases in which nux vomica exerts this anti-vomitive power, there exists disease of the liver of some kind.

Eczema.—Prof. Hebra, of Vienna, (*Zeitschrift der k. k. Gesellschaft der Aerzte*) uses cold epithems as a remedy in mild cases of eczema. The application, if continued too long, will produce artificial eczema. In more chronic cases, Hebra recommends the ung. iod. sulphur. ℞. *Sulph. iod.* ℈j.; *ung. sinplex*, ℥iij. M. The ointment is rubbed on the part affected, twice daily, the cold fomentations still continuing.

In very obstinate cases, Hebra immersed his patients for eight hours daily in a tepid bath. This was persisted in for fifteen weeks, and they were even compelled to take their meals in the bath. The experiment was successful in two cases.—*Edinburgh Monthly Journal.*

Fever—Intermittent.—Dr. Schreiter recommends (*Presse Médicale Belge*) as a succedaneum to quinine, a solution of phosphorus in oil of turpentine. Two grains of the metalloid dissolved in three ounces of turpentine, furnishes, according to this author, an efficient medicament, which should be administered in doses of fifteen drops, every three hours, in barley water.

Hydrocele.—Dr. Bellucci (*Il Filiatro Sebezio*, May, 1854) asserts that many cares of hydrocele may be radically cured by the use of an ointment composed of one or two drachms of powdered digitalis and an ounce of lard. The treatment usually lasts from one to three months. The five cases reported by Dr. Bellucci in support of this treatment, corroborate the researches of Dr. Raymond Falot,* in regard to the absorption of digitalis, when applied to a cutaneous surface.

Ophthalmia—Scrofulous.—Dr. Bouchet has been led, by a consideration of the beneficial effects of iodine on scrofulous tumours and ulcers, to enquire into the effect of this metalloid when topically applied in pustular ophthalmia. The treatment he has adopted consists in directing the vapour of iodine against the mucous membrane of the eye, by means of an apparatus composed of a funnel inverted over a heated capsule containing iodine. In the *Gaz. Médicale de Lyon*, for January, 1854, Dr. Bouchet publishes two cases in support of the efficacy of this treatment. It is very likely that it may be found to be a useful auxiliary to other remedies in some cases.

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* See Va. Med. & Surg. Journal, Vol. I., p. 412, August, 1853.

Prurigo.—Dr. Richart, of Soissons, publishes (*Rev. de Thérap.*, June 1st,) the composition of a remedy which, he asserts, is a true specific for *itching*, whatever its cause, and which he has used particularly in prurigo of the vulva and anus. Equal parts of coarsely powdered sulphate of zinc and alum are gently heated in an earthenware vessel, until air bubbles are no longer disengaged, and the mass has acquired a stoney hardness. This mass is finely powdered, and rather more than half an ounce is thrown little by little, into a pint of boiling water. The solution is filtered and kept for use. It is applied as a lotion, night and morning.

Psoriasis.—Eulenburg makes a solution of gutta percha in chloroform, which he finds very useful as an application in many forms of skin disease.

In psoriasis diffusa of a year's standing, the application caused a complete cure, after three weeks use, (*Vide Medecin Centralzeitg.*) In two cases of eczema, also, the fluid was applied with perfect success, after being persisted in for three or four weeks.

Rachitis.—In *Froriep's Tagesberichte*, No. 528, Dr. Hauner describes the remedies he employs against this disease. They comprise baths of bran, chamomile, calamus aromaticus, tan, and malt, ferruginous baths, lotions of the spirits of ants (*spir. formicarum**), and frictions on the spine with the common juniper. Internally, he administers cod-liver oil, which he regards as *the* remedy in rachitis. He also prescribes tonics, especially the extract of bark prepared without elevation of temperature, and the vinous tincture of rhubarb. He forbids meat and vegetables, ordering a milk diet for his patients, with a small quantity of some easily digested farinaceous article. He allows a moderate quantity of sound beer to children over three years of age, and sometimes a little generous wine.

Spermatorrhœa.—Two remedies, digitaline and lupuline, have recently attracted much attention in the treatment of involuntary seminal emissions. An Italian surgeon, Sig. Lepri, while admitting the utility of these medicaments in some cases, very properly observes (*Gazetta Medica Toscana*, Jan. 1854) that as spermatorrhœa depends on various causes, its treatment cannot be uniform. Dr. Lepri has found, when incontinence of urine is associated with spermatorrhœa, that belladonna is of great efficacy in relieving both of these diseases.

Vaginitis.—M. Thiry (*Journ. de Méd. de Bruxelles*, Feb. 1854) believes that slight inflammations of the vagina are treated best by the separation of the inflamed surfaces, and by the use of absorbent powders. After premising a bath and saline purgative, M. Thiry exposes the parts with the speculum, and, if the inflammation runs high and is accompanied by an abundant discharge, the inflamed surface is covered

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* The *spirit of ants* is made by adding two parts of alcohol to one of powdered ants, and distilling a third of the mixture.

with finely powdered charcoal, or powdered bark if the patient's tissues are flaccid and her constitution feeble. The dressing is completed by the introduction of a tampon of raw cotton. This dressing is repeated every morning. The average duration of mild vaginitis treated by this method is six days. In more intense forms of inflammation, the same treatment is adopted, with a preliminary cauterization with the nitrate of silver, and occasional injections with a solution of alum.

BIBLIOGRAPHICAL RECORD.

I. *Pneumonia; and its Supposed Connection, Pathological and Etiological, with Autumnal Fevers; Including an Enquiry into the Existence and Morbid Agency of Malaria.* By R. La Roche, M. D., &c., &c., &c. 1854. Philadelphia: Blanchard & Lea.

The belief that the causes of pneumonia and periodic fevers are identical, which is of somewhat ancient origin, having appeared to be gaining ground in the country, so wrought upon Dr. R. La Roche, a distinguished medical philosopher of Philadelphia, that he, as he tells us, precipitately abandoned a favourite work, upon which he has been engaged for many years, to take up the subject and set the world aright upon the question. In fulfilling this undertaking, he has produced us a book of curious importance. We say curious, because the greatest interest of the work is collateral. It is an important book upon a rather unimportant subject. The question which it was intended to refute, might have, in our opinion, been despatched with a much less elaborate performance. In this respect, the author reminds us of an engineer, who, across a brook requiring at best but a simple and unexpensive structure, chooses to throw a grand and lofty bridge, decorated with every ornament of his art, and strengthened and perfected by every appliance which human genius has invented. Such a work, although unnecessary for the purpose designed, is not altogether valueless, because it remains as a monument of what human skill and genius can accomplish.

One great value of Dr. La Roche's work, therefore, consists in the fact that it furnishes a perfect model in the art of book-making which we would be glad to see studied by all aspirants at medical authorship, It is a perfect specimen,—an elaborate and complete exposè of the whole subject it is intended to discuss. Indeed, it is difficult to conceive how any one man could, in the short space of two years, the time he allotted to the work, have collected so completely all the details and facts published in the literature of the science bearing on the question; it is still more creditable to his mental training, and to the author's compact and clear powers of reasoning, that he should have been enabled to arrange them in so perfect and cogent a manner.

The book presents really quite a formidable appearance; it is of goodly size, and its closely printed pages have, nearly every one of them, a thick *sediment* of references.

We have never seen any one more in earnest; to use a backwoods expression, the author went at his work with his coat off, and his sleeves rolled up. A more thorough sifting of the whole question, we apprehend, could not be made. He proceeds without assertion—he leaves nothing to conjecture, but fairly lays down his propositions, and with mathematical accuracy proves them by facts alone. His adversaries are remorselessly crushed—they fall not so much by direct blows levelled against them, although he is not wanting in these—but rather sink, hopelessly, under the heap of testimony, which, in his steady, onward course, he pushes before him. The sturdy woodsman fells only the larger trees, leaving the brushwood and undergrowth for those that are to come after him, in the work of clearing the soil. Our author not only levels all as he goes, but with gigantic grasp seizes upon what has fallen, and with a puff of his breath dissipates it, not leaving, in many cases, even the debris to encumber the ground.

As we read on, we could not help from thinking, that if he possessed so much power over those opposing him upon a two years' notice, what must be the fate of those coming in his way, when he shall publish that more favourite work which has so long claimed his attention.

Investigations of this kind are of far more importance than might at first sight appear to the reader. In the great scramble after information respecting the pathology and treatment of disease, etiological enquiries have been too much neglected. The subject is beginning to claim the attention it deserves.

We are much in want of clear views respecting the causes of diseases. When these can be traced out, the most favourable stand-points are reached, from which not only to observe their nature, but also for combatting and controlling their progress. In many cases, such knowledge alone is all sufficient to lead us to the most satisfactory conclusions as to what will be the result of an attack, and how it should be managed to secure a favourable termination.

It is obvious, therefore, that each different source of morbid action should be clearly defined, in order that the series of changes which it tends to induce, may likewise be made out and understood. Then we should abandon many of the prevalent loose ideas about distinct maladies springing from a common origin, and give every observer a chance of adding, under its appropriate head, something to our stock of knowledge regarding the behaviour of the system under the influence of the different sources of its disorder, extant in the world. Nosological arrangements, considered of so much importance by the older writers, have been to a great extent, abandoned by modern systematic authors on medicine, on account of the exceeding difficulty of making an accurate classification.

Such attempts have failed and most likely will, for some time to come, but we do not despair of their ultimate success; and in the consummation of this result we can but think that etiology will play a most important part. Writers have started at the wrong end—they have preferred the resulting phenomena as guides, instead of looking to the starting point of disease. A knowledge of their causes already enables us to group many diseases in the most satisfactory manner.

It is clearly unphilosophical to conclude that there are not fixed laws governing the organism, under the disturbing influence of different agents antagonistic to its integrity. We see it manifested too clearly in therapeutics, to admit of any doubt upon the question. If the contact of certain agents excite catharsis, that of others emesis, there can be no reason to doubt, that a like regularity may be claimed in the action of morbific agents upon the system. This is the true way to study the natural history of disease.

When thus pursued, after tracing a disorder to its cause, we can pretty well predict, in future observations, how that cause will act in individuals exposed to its influence. But it may be urged, that the differences in constitutions, and the circumstances of individuals, will so modify its action as to create a great barrier to the accumulation of accurate data in this way.

This difficulty is not insurmountable. Extended observations conducted in the right way, and in view of those disturbing influences, will, in time, collect such an array of facts as will set at rest this objection. Idiosyncrasy, offers a much more serious obstacle. "Idiosyncrasy," says Dr. Holland,* "as arising in most cases from inappreciable causes, is the most absolute and inevitable difficulty in medical evidence; since no accumulation of instances, such as might suffice for the removal of all other doubts, can secure us wholly against this source of error."

But we are not certain that this objection is not susceptible of much mitigation. The subject of idiosyncrasy is one demanding further investigation. There is much reason for believing that it, in a large number of cases, is itself a pathological state which might be pointed out, and ultimately in all its different forms classified, so that its influence might be taken into account in this estimate of the consistent action of the causes of disease. In this sense, then, it is made to come under the head of simple differences of individual constitution, arising from appreciable causes.

Our author seems fully aware of the great importance of these investigations, and he has gone into the consideration of the subject of the etiology of pneumonia and periodic fevers, with a zeal and intelligence above all praise. Here is what he promises to do in his book:

"For these reasons, and considering also that these opinions are likely to lead, if adopted and acted upon, especially by inexperienced physicians, to a hazardous practice; bearing in mind, besides, that from the influential position which some of their advocates occupy, there is reason to fear they may continue to make converts, not only among medical students, but among that class of professional readers—unfortunately too large among us—who are easily seduced by real or supposed novelties, and fanciful and whimsical notions; and convinced, in addition, of the necessity of ascertaining, without loss of time, the value of dogmas bearing directly or indirectly on practical points, when presented and enforced by men of note and reputation, I propose to devote this volume to a survey of the facts and arguments that may be adduced, and this to test, in its various details, the hypothesis to which attention has been called, and see how far it is deserving of our adoption."

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* Medical Notes and Reflections.

And here, again, is what he expects his opponents to prove:

"The reader will easily perceive that, before the advocates of the identity of the two diseases can successfully sustain the position they have assumed, it will be necessary for them to show that autumnal fevers and pneumonia are produced by the same causes; that they prevail in the same places, and during the same seasons of the year; that their existence and diffusion are promoted by the same agencies; that they are arrested by similar means; that they exercise their effects on the same classes of individuals; that they present similar or kindred symptoms; that they affect the same organs, and produce the same or analogous changes in the fluids and solids; that they are governed by the same laws; and that they present other points of approximation invariably found to be possessed by diseases betwixt which there exists the close connection claimed in the instance before us."

We have already intimated that a great excellence of this work was incidental to its main design. Many a reader might hesitate to wade through so many pages, fringed off with such an array of references, simply to satisfy himself on the question (although it is admitted to be an important one) as to the identity in their origin of pneumonia and autumnal fevers. For this reason we have thought it would be profitable to our readers, to present them with such a brief abstract of its contents as our limits would admit of. We desire to call attention to the great storehouse of information it presents with regard to the etiology of the two diseases, and to show its great value as a work of reference.

The first chapter commences with the origin and prevalence of this belief in the connection of pneumonia and autumnal fevers. After presenting the authorities, ancient and modern, numbering many names long and highly distinguished in our literature, who have advocated the doctrine, he boldly proceeds to advance his own opinion, in these words:

"But so far as I am concerned, I have no hesitation in stating, as the result of my personal observations, aided by extensive enquiry and close reflection, that pneumonia is not *sometimes* but *always* an idiopathic disease, whether it occurs sporadically or epidemically; whether in the south, in the north, in the east or in the west; whether in fever districts or in fever seasons, in places or at periods of the year free from periodical fevers; and that it is due to causes perfectly distinct from those to which such fevers owe their origin."

This position he proceeds to establish by discussing the following propositions.

"1st. Pneumonia common where fevers seldom or never are seen. 2nd. Pneumonia not necessarily present where fevers are common. 3rd. The two diseases prevail in different seasons. 4th. They appear under the influence of opposite winds. 5. Pneumonia is of yearly occurrence—not always so fevers. 6th. Their altitudinal range is not the same."

These several points are taken up and discussed in the most elaborate and satisfactory manner. The amount of erudition and patience displayed by the author, here, as indeed everywhere, is amazing. He appears to have read everything, to have digested everything, and to have brought everything that has ever been published touching the question, to bear in his argument, and that, too, in a concise and happy manner. Trusting to the records of science alone for his arguments, he has given us a most interesting sketch of the habitudes of the two classes of diseases, which of itself, in our view, is sufficient to establish his point.

His next step is to show, that autumnal fevers spring invariably from a specific cause, which is consistent in its action, and which cannot act in any other way than in their production.

Three chapters are devoted to the consideration of the existence and morbid action of malaria. While it cannot be said that these contain anything new or particularly striking, yet we know not where to direct the student for a more complete and better arranged account of the whole subject. It is a finished production, furnishing and weighing all the arguments, both ancient and modern, for and against the existence of such a morbific agent. It is shown that long before Lancisi, the observations of his predecessors had developed the facts upon which his idea of a specific miasm, as a cause of this class of fevers, was formed. In promulging it, like many other discoverers, he only gave a definite expression to facts and ideas vaguely shadowed forth in the minds of others.

Since his time, the doctrine has continued to receive strength from increasing evidence in its behalf, so that the array of testimony presented, from the most reliable sources, by our author, we think, renders it impregnable.

The entire ground is occupied, over which it is unnecessary for us to follow, since much of it must be familiar to our readers. We shall therefore content ourselves by only calling attention to a single point, which is fraught with much practical interest. This is the state of the atmosphere in malarious or fever districts. It is well known that chemists have been unable to detect this or other morbific agents in the atmosphere of places where they were known to exist, or to show, indeed, any marked variation in the constituents of atmosphere anywhere, whether obtained from the mountain's top or the lowest valley.

It is true, that the detection of sulphuretted hydrogen, made by Professor Daniel of England, in the air circumambient to the African rivers, and confirmed by Dr. Gardner, formerly of Hampden Sydney College, in his experiments in contiguous fever localities, led to the theory that it was in some way connected with the etiology of periodic fevers. But these views have been shown to be untenable, and it is illustrated by our author, that no known gaseous compound can have anything to do with their production. But it is not true that nothing is found in the atmosphere of sickly localities. Our author has collected all the facts connected with this interesting subject.

It is a very significant fact, that the experiments of many different chemists, made in various localities, have developed the existence of organized matter in the water dissolved in the air of insalubrious districts.

Our author cites the following, which we will present in a condensed form :

Moscati obtained a "flocculent matter," emitting a cadaverous odour by condensing the water dissolved in the atmosphere of insalubrious places. Brocchi found "albuminous flakes" in the dews of the Pontine marshes. Vairquelin obtained "flakes of animal matter" from dew obtained from marshes which had been kept six months, and alkaline salts with vegetable and animal matter from fresh dew, from the same localities. Dumas and Volta found an organic substance combined with the gases disengaged from stagnant water.

The experimenters further show, that the air of marshes, if kept six months, acquires a nauseous smell, an effect not noticed in common air. From this, it will be seen that the labours of the chemist have not been altogether barren of results. On the contrary, the facts upon which they have agreed in relation to the matter, although furnishing no sufficient data for the settlement of the question, are of a character eminently suggestive. They are more than sufficient to excite further enquiry, which we would rejoice to see extended.

As touching upon this subject, we think it cannot be uninteresting to allude here to a new method of investigating the qualities of the atmosphere, suggested some years ago by some experiments of Doctor Schwann, of Berlin. This is by filtration. It was clearly shown that air filtered through cotton was deprived of certain qualities, which prevented it from putrefying boiled meat, and delayed the fermentative process. The interest of these experiments, in regard to the subject we have been considering, arises from the fact that they show the existence of a matter, otherwise not appreciable, which can be filtered out of the atmosphere. The whole subject presents a most inviting field of enquiry, to which we would earnestly direct the attention of the student.

From a discussion of malaria the reader is next conducted to a comparison of pneumonia with autumnal fevers, in reference to their causes, symptoms, and anatomical characters, &c. Such a comparison was just the thing to bring out in the boldest relief the different characteristics of the two classes of diseases, and we need hardly say, it is accomplished in the most thorough and scientific manner. With regard to the cause of pneumonia, nothing new is advanced, except many striking facts to confirm the established doctrine that cold, atmospheric vicissitudes, &c., are the chief agents. Its habitudes and modes of progression as being more or less universal, is strikingly contrasted with the marked localization in the prevalence of fevers; and the difference in their symptoms, anatomical characters, and the different manner the solids and fluids are affected by the two morbid states, is dwelt upon with convincing power, to prove the want of analogy in their causation.

The same thing is further illustrated by a beautiful fact. It is the affinity of morbific agents for special organs. All miasms or toxic agents have their peculiar tendency to affect particular organs. In the language of Hunter, as quoted by our author, "poisons take their different seats in the body as if they were allotted to them." Now, if we trace periodic fevers to a toxic agent, we are bound to define the peculiar way it acts upon the system, and having done this, it must be clear that it is not capable of producing other and opposite symptoms. This is a strong point on which to stand, to view the whole subject. Of itself, we believe it is sufficient to settle the whole question. It is not wanting in analogy. Our author has produced that furnished by therapeutical agents, and the history of other morbific agents is replete with the same.

We know of no more satisfactory way of examining such questions than this, and herein is the reason why, in the early part of these remarks we ventured to express ourselves so strongly in favour of a careful study of etiology. It must be plain that it would guide us clear from many errors, because the same principle can be applied to all cases of disease. Analogies have been supposed to exist between many diseases, which this simple test would refute. Ague and cholera, for instance, have been and are supposed now by many eminent men to be identical. How does this question stand the test of our author's rigorous law? The former is an old acquaintance; we know of it from childhood; we can tell where to go to get it, and where to go to avoid it; and although here and there it produces a mortal result, it excites no fear; we know that it has resulted from error, imprudence, or an accidental complication.

But how different the latter? It starts up from the remote east, and is flung athwart the world as the shadow of a great tomb. We hear of its outbreak in India, and the remotest heart is stilled with awe. It comes on with a steady, though capricious step—advancing now, now retrograding, but all the time gaining ground. Siberian snows, nor Italy's balmy air, affect it; it marches onward to its work, finishes it, and then leaves the world awhile at rest. Not to their difference in cause alone, that of their symptoms, pathology, the way the fluids and organs of the body are affected, all indicate the radical difference in the two diseases. Of these, it is enough to mention the variation in the state of the blood as found to exist in them. Ague destroys the red corpuscles, and repletes the vessels with aqueous fluid. Cholera drains out the water, as through a sieve, and leaves the solid particles of the sanguineous fluid behind, as a tarry, viscid mass, totally unfitting it for circulation.

The last chapter of the work is devoted to the consideration of pneumonia and periodic fever, existing together as a hybred disease.

Upon this subject the author's views are very clear, and they are enforced with his usual power. We would be glad to follow him in this discussion, because it is replete with valuable information, and takes ground which we have long held, but our limits forbid us. Already has this notice become too much extended for the space allotted it. We cannot conclude, however, without expressing our conviction that we have failed, even in the little which we have attempted, to do full justice to Dr. La Roche's work. Indeed, we found the task much more difficult than we expected. The book itself is an analysis and a criticism, and we have found it rather hard to bring out its strong points, when we could find no weak ones.

Its style is heavy, and we hitched occasionally over his long sentences, but the interest of the matter made us amends for that. If we have succeeded in directing the reader's attention to the great importance of the work, it is all we desired or expected. We think it should occupy a place in every library, and we expect to see it largely drawn upon by all future writers upon the several subjects it embraces. The publishers have sent it out in admirable taste—it is a handsome volume, beautifully printed, in a clear and suitable type.

In closing it, we feel that we have been perusing the work of an earnest mind, fully imbued with the stern claims of science, and the high mission of our art; and also that of an ardent lover of his race. We venture to express the hope that this is not the last time we shall hear from Dr. La Roche, we therefore bid him Godspeed with that more favorite work alluded to in his preface. P.

II. *Woman, and Her Diseases.* By CHARLES D. MEIGS, M. D. Third Edition, Revised and Enlarged. Philadelphia: Blanchard & Lea. 1854. Received from A. Morris.

III. *Professor Meigs' Letter to Dr. Dowler.* (New Orleans Medical and Surgical Journal.) July, 1854.

The third edition of Dr. Meigs' letters to his class, on the Diseases of Woman, has been before the public for some months. In spite of the objectionable affectations and extraordinary linguistic phenomena with which its many virtues were overlaid, the profession have given the author the most agreeable evidence of their approbation, for they have bought up the first two issues, and have already called for a third.

It does not follow, however, as a matter of course, that because a book sells, *therefore* it is to be considered as worthy of the highest honors or the most unlimited praise. The public, even the medical public, often purchase a book to gratify a curiosity, and we think it very probable that the many squibs of the critics, the various "non understandable" words, and "incognoscible" expressions which have been noticed by the reviewers, have made the medical world anxious to see what this departure from the usual routine of "medical dullness and time-honoured clergyableness" would result in.

In truth, there is no better way of making money out of our public, than this very one which the Professor has adopted. If a builder wishes to find a purchaser for his house, he invents a new order of architecture, and no matter how incongruous are its proportions or inconvenient its arrangements, if it is something new, he meets with ready sale. Whether one wants a new garment, a new carriage, or a new couch, he must first be satisfied that the intended purchase is something the like of which no one else could boast of, and then he is delighted.

The reviewers have, with regard to this production of Dr. Meigs, proved, that surely such a medical work was never seen before, and if our argument is correct, have thus been of incalculable service in advancing its sale.

We are, therefore, surprised to notice in a late number of the New Orleans Medical and Surgical Journal, that the Professor has, in a letter to the editor, Dr. Dowler, given utterance to some notes of complaint at the persecution which he has received from various "*young people in New York and Virginia*," although he expresses himself greatly comforted whilst remembering, that though "young gentlemen," the "*sophomore scollards*," assail him, yet he has already sold 20,000 copies of his writings, and the public is still clamorously "asking for more." We candidly believe that he owes this good fortune, in some degree, to those very reviewers, of whom he says, "Were I governed only by the opinions of those young gentlemen of our brotherhood who *do* most of the American medical reviews, I should have resolved never thereafter to open my mouth in their presence, but holding my peace, leave them alone in their self sufficiency."

The Professor, however, is at last driven for comfort to the Bible, and with true christian resignation, thus philosophises: "In the 2d chapter of 2d Book of Kings, I shall find a story concerning the *prophet Elisha*. He was old, and well stricken in years, and so am I; he had a bald head, and so have I; he went on his way in the world, and so do I; he met angry and naughty boys, so have I; they scorned his grey hairs and hooted at his bald crown; probably they thought him 'unfit for his eminent station,' and they cried out, 'go up, thou bald head, go up, thou bald head.' The prophet turned and cursed them, so do *not* I; and the Lord sent two she bears out of the mountain, and 'they tare forty-ty and two of those children that day.' I am very sorry for the poor dear little Jew boys that were torn, and I hope my reviewers may keep clear of all such, and other vermin."

We will leave the Professor in this good company, and hope he will derive godly consolation from "the book of books."

There is one point of similarity, however, between the prophet Elisha and the distinguished Professor, worthy of notice. Neither of them have ever been *translated*, and we fear without some such miraculous interposition of providence, that some of Dr. Meigs' *Letters* will remain "non-understandable" and "incognoscible," to the end of time.

EDITORIAL AND MISCELLANEOUS.

THE CAUSE OF CHOLERA.

The epidemic cholera, that mysterious and awful scourge, has, for the third time, passed over our country, and is about to leave us, just as ignorant of the causes which originate, the laws which control, or the remedies which cure it, as we were when first we beheld its ungovernable ravages in 1832.

The number of deaths in Richmond during this visitation have been much fewer than either in 1832 or 1849, and those confined almost entirely to the imprudent and drunken negro hireling, or to the equally careless and dissipated emigrant.* The cholera is, indeed, the great scavenger of our race, for, with few exceptions, it passes harmlessly by the sober and useful member of the community, probably giving him a slight caution to remind him of his dangerous neighbour, and pounces down with fierce malignity on the intemperate, the vicious or the filthy.

That there *is* an epidemic cause of cholera, is not to be doubted, for the Stethoscope, in its August number, has proved that point mathematically. This second *Mr. Gradgrind* knocks the wind out of certain unfortunate disputants in this city who have doubted the existence of an epidemic, in this most masterly and elegant manner: "For these grannies in petticoats we feel some pity, but towards those in breeches, we feel disgust and contempt."†

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* The quarterly returns of burials, from cholera, at the City burying ground, to July 31st, number 121 cases. At the present date, August 23d, when the disease has nearly left us, we may safely make the whole number of deaths by cholera as probably from 200 to 225.

"Sir," says *Mr. Gradgrind,* "We want nothing but Facts. Stick to *Facts.*" Here they are, sir. "It is sufficient for us to state here, that without the epidemic cause of Asiatic cholera, no case of Asiatic cholera can occur."‡ There is a *Fact,* and a stubborn one. If that is not enough for you, We'll prove it *algebraically.* "Exposure and imprudence alone cannot produce it. They may, and always have, produced diarrhœa, dysentery and cholera morbus, but they do not produce Asiatic cholera, unless the cause of Asiatic cholera be superadded. For example:

"$A + I = D$. but $A + I + X = C$. The unknown quantity X, is a necessary element in the last equation."‡

The next step is, to find the value of X, or in other words, to ascertain the *cause* of cholera; a problem which, even the Stethoscope dreads to venture upon. But ah! 'tis done, and *William John Thomas, Esquire, M. R. C. S., Kirkdale,* is the man who has solved the enigma. Hear ye him. He makes light of the whole matter, for "the principle of life is *Light.*"§ Yea, more than this, the principle of death is *Light,* for "the minimum of organic intensity is attained under the least refrangible—the red ray—and death is the result." Therefore, "the predominance of the least refrangible rays of light, is fatal to organic vitality."

Our reader is beginning to see through the darkness which has shrouded this question. We are glad of it; it *is* a difficult question. *William John Thomas, Esquire, M. R. C. S.,* however, makes it still plainer. "The least refrangible" [or death-sending] "rays are epipolarized, but the invisible actinic and violet, blue and indigo" [or health-giving] "rays are peripolarised." That being the case, it is perfectly apparent that "the same cause which relaxes the magnetic vinculum, which binds in one harmonious unity the chromadic triadism of normal light, at the same time alters the polarity of the constituents of light."||

Who can help admiring the unctuosity, luminosity, and "harmoni-

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† Vide Stethoscope, August No., p. 478.

‡ Stethoscope, August No., p. 478.

§ London Lancet, July No., p. 45.

|| London Lancet, July No., p. 46.

ous unity " of that proposition? Every one can understand it now. "The cause is the repelling power of the negative electricity of the earth evolved in abnormal abundance by a mathematical alteration in the curves of the great polar elements circulating in the earth."

It having been proved, mathematically, that cholera has a cause, it is now shown that this cause is "a mathematical alteration in the curves of the great polar elements," and still further, "the cause of the alteration from the normal circle to the ellipsis, the parabola, and hyperbola, in the dynamism of the magnetic elements traversing the globe, is the same which operates in effecting the variations in the presumed *status* of the iso-clinal and iso-dynamic lines, the internal pressure of non-polarised light in the structure of the globe."

Finally. "The cause of the internal abnormal pressure of non-polarised light in the structure of the globe, may be traced to the secular and periodical Helionphotic obscurations; and, *therefore*, the cause of the Asiatic cholera, which has traversed the globe, is of cosmical origin, and universal parentage."

It cannot be possible, after this, to have any further doubts as to the true cause of cholera. If any one should still not understand the subject, after the luminous explanations of *William John Thomas, M. R. C. S.*, he must be laboring under a "Helionphotic obscuration," which not even "the chromatic triadism of normal light can dispel."

A BIOGRAPHICAL SKETCH OF DR. JOHN CLAYTON.

In looking over the records of the past, we frequently meet with facts tending very much to reduce the self-satisfaction with which "we of the nineteenth century" regard ourselves, and teaching us to place a proper estimate, not only on the advances we have made, but the ground we have lost.

This little sketch of a Virginia physician who flourished one hundred and fifty years ago, somewhat illustrates our idea. We would respectfully ask the profession in this state, now numbered by thousands, is there one amongst you who would venture to fill the place of John Clayton?

This very learned botanist and eminent physician, is said by Mr. Jefferson, in his Notes on Virginia, to have been a native of this state, but it is more than probable that he was born in England, about the year 1685. He was, however, a resident of Virginia in 1705, and lived near Williamsburg. As a practical botanist, he ranked with any of his age. He was a member of many of the learned societies of Europe, and a correspondent of the distinguished naturalists of that day. He devoted a long and industrious life to exploring and describing the plants of this country, and is, indeed, believed to have enlarged the botanical catalogue as much as any man who ever lived. Dr. Clayton's principal literary effort was his "*Flora Virginianica*," published by Gronovius, of Leyden, 8vo., in 1739, 1743, and 1762. This work is frequently referred to by Linnæus and all the succeeding botanists, whenever treating of the plants of North America. He also published, in the Philosophical Transactions, several papers on the various species of tobacco, and an elaborate description of the medicinal plants which he had discovered in Virginia.

At the advanced age of 87, this indefatigable student of nature made the botanical tour of Orange county, in Virginia, which at that early date was a complete wilderness, and it is believed that he had visited almost every portion of the state in the prosecution of his scientific researches. He died December 15th, 1773, at the age of 88.

Dr. Clayton left, at his death, two volumes of manuscripts prepared for the press, and a Hortus Siccus, with marginal notes and references, for the engraver who should prepare the plates for the proposed work. When the revolutionary war commenced, these valuable manuscripts were in the possession of his son, who deposited them for safe keeping in the clerk's office of New Kent county. This building, unfortunately was destroyed by fire, and with the records of the county perished the labors of Clayton.

Withal, our old naturalist was a pious and unostentatious member of the Church of England, and often, in examining a flower would "look through nature up to nature's God." He declared, whilst seeing the infinite wisdom and contrivance displayed in the structure of the smallest plant, that it was impossible for a botanist to be an atheist. He ever bore the character of a good citizen and an honest man, and his descendants, many of whom are still found in New Kent county, may point with equal pride to the scientific reputation and sterling integrity of Dr. John Clayton.

[Many of the facts in the above sketch are derived from that interesting old book, "Thatcher's American Medical Biography."] M.

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

ART. I.—*Hospital Reports.* [illegible] By Geo. L. Upshur, A. M., M. D., Surgeon [illegible] Marine Hospital, Norfolk, &c. &c.

CASE XXXI.—*Acute Rheumatism.* [illegible], single, black eyes and hair, [illegible] and generally healthy, entered Feb. 5th.—Was seized on [illegible] January with general aching of the head, back, and limbs, [illegible]. On [illegible], violent pain in the muscles of the lower extremities [illegible], with swelling and tenderness. The pain was [illegible], and within a week past the joints of the upper extremities have become involved. He has never had syphilis or gonorrhœa. Pulse [illegible], full, 110; tongue clean, thick and clammy: bowels [illegible]; appetite impaired; skin very moist. He cannot move himself without great pain in all his joints, which are red and swollen. ℞. *Ol. tiglii,* gtt ij; *[illegible]* M. Ft. pil. ij. S.: one pill every four hours until the bowels are freely moved—afterwards 5 grs. quinine every three hours.

Feb. 6th.—Took one pill only, which acted freely; has taken 10 grs. quinine, and says he feels better in every respect. Continue treatment. On the 8th, he was much in the same condition. Pain less; skin moist and clammy; restless, particularly at night. Ordered a tablespoonful of lemon juice every three hours, and 10 grs. Dover's powder at bed time. This treatment was continued until 11th, when the right wrist and elbow were alone involved. The bowels were regular, and he had no fever. Discontinue lemon juice and give a teaspoonful 3 times a day of the following: ℞ *Potass.* [illegible], ʒi; *aquæ,* ℥ij. M.

On 22d, he was fairly convalescing, and continued to improve up to 6th of March, when he was discharged. There were no cardiac symptoms in this case.

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* See *Ante,* Vol. ii, p. 133, *et seq.* and Vol. iii, p. 100, *et seq.*

CASE XXXII.—Wm. Smith, æt. 44, coloured, single, stout, and previously healthy, entered February 6th. Has been trading recently to New Orleans and other southern ports, and was seized on 3d, with chill, followed by fever, and terminating in sweating. On the 5th, he had another paroxysm, and on 6th another. I saw him for the first time on the 7th, when he was suffering with acute pain in the elbow joints, which were very much swollen; bowels regular; tongue clean; pulse irritable, soft, 100; appetite good; no thirst. ℞. *Quiniæ sulph.*, gr. xx.; *pulv. Dover*, gr. xv. M. Div. chart. iv. S.—one powder every 3 hours.

Feb. 8th.—Feels better; sweats profusely; no fever; pain in all the joints, but more severe in the elbows. Continue treatment. On the 9th he was sitting up, the pain being confined almost entirely to the upper joints. Ordered 5 grs. potass. iod. to be given 3 times a day. He was discharged on the 1st of March, entirely relieved.

There were no cardiac symptoms, or syphilitic taint, in this case.

CASE XXXIII.—Capt. Baker, æt. 27, married, of rather delicate frame, entered March 11th. Has had several attacks of rheumatism, and was seized yesterday, after exposure to a cold, damp wind, with pains in the back and stomach, which soon shifted to the ankles and wrists. These joints are chiefly affected, are swollen, red, and exquisitely tender on pressure; pulse full, incompressible, 110; tongue coated white; thirst and anorexia; bowels moved once to-day from medicine. ℞. *Pulv. jalap; hyd. submur.* aa. grs. x. M. To be given at once.

March 12th.—Had a good deal of pain in the ankle and knee joints all night, wrists less painful; tongue cleaner; pulse 100, full, but softer; three stools, bilious and consistent; no appetite; very thirsty; skin warm and perspirable; no cardiac distress and action of heat normal. Ordered a tablespoonful of lemon juice every two hours, and 15 grs. pulv. Dover, at bed time.

March 13th.—Slept tolerably well; lemon juice gripes him; less pain; joints still swollen and red; bowels moved once; skin dry and warm; tongue heavily coated; thirsty; pulse as yesterday; uneasiness in the region of the stomach, and muscles of the back very sore. Discontinue lemon juice. ℞. *Quiniæ sulph.* gr. xx.; *pulv. Dover*, gr. xv. M. Div. chart. iv. S. One powder every 3 hours.

March 14th.—Suffered all night with pain at epigastrium, for which he took 50 drops of tr. opii. with relief. Pain as yesterday; bowels confined; pulse soft, 80; other symptoms unaltered. ℞. *Ol. Tiglii*, gtt. j.; *sapo. hisp.* q. s. M. Ft. pil. j. S. To be taken at once.

March 15th.—Pill acted copiously; pain in the joints has nearly disappeared, but the patient is pallid, with hurried respiration, exceedingly rapid and irregular pulse, 140, and a good deal of restlessness; action of the heart is confused, the sounds being merged one into the other, and scarcely distinguishable; complains of pain at epigastrium. Ordered a sinapism to precordia; rest in the horizontal posture, and perfect quiet. ℞. *Potass. iod.* ʒij.; *aquæ,* ℥iv. M. S. A teaspoonful 3 times a day.

March 15th.—Feels better; sweats profusely; no pain; action of heart more regular; pulse 110, soft, slightly intermitting; respiration nearly natural; first sound of the heart rough; second sharp; no pericardial sound. Continue treatment.

The iodide of potassium was continued until 2d April, when he was discharged cured—there being no cardiac difficulty left, except a slight roughness of the first sound.

Case XXXIV.—*Pneumonia—Mercurial Prostration—Recovery.*—Capt. Harnly, æt. 22, small stature, sanguineous temperament, previously healthy, entered April 7th. Had lost both parents from phthisis; has recently been trading through the Dismal Swamp Canal, and is subject every year to an attack of intermittent fever. He was seized three days ago with chill and fever, and a trifling cough.

Present Condition.—Pallid; drowsy; headache; pulse frequent, 120, feeble; respiration as if he had been running; slight cough, no expectoration; bowels confined; percussion dull over right lung posteriorly; clear elsewhere; respiration simply feeble; patient restless; skin dry and warm; tongue natural. ℞. *Hyd. submur.* gr. v.; pulv. Dover, gr. x. M. To be given at once.

April 8th.—Slept badly; epistaxis this morning; pulse 128; not very compressible; respiration, 30, and oppressed; complains of excessive debility; thirsty; no appetite; very little cough, and no expectoration. I detect a feeble, crepitant râle over lower lobe of right lung posteriorly; percussion as yesterday. Ordered 6 oz. blood by cups from chest, posteriorly. ℞. *Tart. emet.* gr. ij.; *syr. scillæ,* ℥j.; *tr. opii.* gtt. xxx.; *aquæ,* ℥iv. M. S. A tablespoonful every 2 hours.

April 8th.—Rested tolerably well; respiration 36, interrupted; pulse uniform, soft, 104; coughs a little; sputa tolerably abundant, mucoid, without any rust; bears the tartar emetic without nausea; no appetite; skin natural; bowels not moved since yesterday; less thirst; tongue moist, coated white, flabby; very slight crepitus; expiratory sound at base of both lungs posteriorly, and percussion dull over same location. Continue treatment.

Evening.—Talks incoherently; wants to walk about; respiration 44, hurried; pulse 128, feeble; no pain; tongue dry; listless and drowsy. ℞. *Hyd. sub. mur.,* gr. x.; *quinæ sulph.* gr. xx.; *pulv. opii.* gr. j.; M. Ft. pil. x. S. Give two pills at once, and afterwards one every 2 hours.

April 10th.—Was delirious all night, insisting upon getting out of bed and going down stairs; tongue dry, cracked, and coated dark; pulse 104, compressible; face pallid; respiration hurried; skin dry; thirst; eyes injected; bowels moved twice; coughs but little and expectoration still devoid of rust. Physical signs as yesterday. Continue treatment.

Evening.—Delirium continues, with pallor of face; pulse 108; in other respects as this morning. ℞. *Hydr. sub. mur.,* gr. x.; *tart.*

emet. gr. ij.; *pulv. opii.* gr. j. M. Ft. pil. x. S. One pill every 2 hours.

April 11th.—Very restless all night, talking wildly, and insisting on getting out of bed; thirsty; vomited a little during the night; found him with decubitus on the back; moans a good deal; now drowsy, then starting up suddenly; pulse soft, 96; skin dry, but not very warm; skin dusky; eyes natural; bowels moved once; coughs more and respiration less hurried; eats nothing; tongue parched and cracked; sordes on teeth; expectoration less abundant and decidedly rusty; no pain.

Physical Signs.—At summit of right lung, posteriorly, percussion is nearly flat, becomes clear over middle lobe, and very dull at the base; the dulness extending regularly around in the course of the ribs; respiration in right lung is feeble generally, there being only a slight expiratory sound over the dull percussion. At lower portion of left lung posteriorly, the percussion is a shade less resonant than natural—respiration puerile. ℞. *Hydr. sub. mur.* gr. xii.; *pulv. opii.* gr. j. M. Ft. pil. xij. S. One pill every hour.

Evening.—No alteration. Ordered 5 gr. ammon. carb., to be given with each pill.

April 12th.—Rested better than heretofore; still delirious and pallid; pulse 104, compressible and stronger; decubitus on the back; mouth and eyes half shut; coughs less; respiration 40, irregular; skin dry, not very warm; one stool during the night; thirst and anorexia as usual.

Physical Signs.—Percussion as yesterday; intense bronchial respiration over upper and lower lobes of right lung behind, and feeble elsewhere; puerile in left lung; crepitus has disappeared; expectoration scanty and rusty. Continue treatment.

April 13th.—Passed a restless night; decubitus on back; hiccough all night; less duskiness of skin; bowels moved once; tongue absolutely dry, red, cracked, and protruded with difficulty; pulse 112, soft, but not feeble; respiration 44, rather less oppressed; while counting his pulse, he watched me with more intelligence than usual; is thirsty and complains of sore throat; coughs but little, and expectoration, which is more abundant, is nearly devoid of rust; talks more coherently. No change in the physical signs, except there is less feebleness of respiration in right lung, and a slight crepitant rhonchus may be detected over the hepatised portion. Continue the pills, with 30 drops sp. ammon. arom. with each one.

April 14th.—Rested tolerably well, but was a good deal troubled with hiccough, which still exists; is more rational; skin less dusky; coughs as usual, and sputa not at all rusty; respiration easier, but so interrupted by hiccough as to render it difficult to count; tongue becoming moist and is less red; bowels moved twice; no pain; pulse 100, small and feeble; skin dry; percussion as yesterday; crepitant rhonchus very decided in right lung behind. Continue calomel, with 5 grs. ammon. carb. every hour, and milk toddy. For the hiccough, a roller was applied tightly around the short ribs.

April 15th.—Found him sweating profusely; rested badly; hiccough has nearly disappeared; skin very cool; intellect dull; decubitus on the right side; pulse very feeble, 108; lies with the mouth and eyes half shut; tongue clean, but dry; chest not examined, but he coughs very little, with no expectoration; resembles a patient just going into the collapse of cholera. Ordered brandy freely or milk toddy as he may desire—sinapisms to stomach, ankles, and wrists, and one grain of quinine every hour.

Evening.—No better; pulse 130, thready; skin cold, clammy, and shrivelled about the extremities; no hiccough; very thirsty; mind dull; refuses to stay covered. A professional friend who saw him with me, says he is *obliged* to die in less than twelve hours. Continue stimulants, and put bottles of hot water all around him.

April 16th.—A manifest improvement; rested tolerably well; decubitus on the back; tongue very dry and protruded with difficulty; countenance less haggard than last night; pulse 112, stronger; skin less moist, and warmer; had three bilious, liquid stools during the night; respiration regular, 24; little or no cough.

Physical Signs.—Percussion not so flat; crepitant râle very distinct; bronchial respiration less intense. Continue stimulants. ℞. *Pulv. cinchon. rub.*, ℥j.; *elix. vit.*, ʒiss.; *aquæ*, Oj. M. S. A wineglassful 3 times a day.

April 17th.—Bowels very loose—ten stools since yesterday morning—would have rested well but for this; decubitus on back; features sunken, but eyes look well; tongue still very dry; skin warm to the extremities, and devoid of the clammy moisture of the last two days; pulse 92, soft, and sufficiently full; respiration natural; coughs very little, and without difficulty; expectoration mucoid; no appetite; is perfectly rational, and complains only of excessive prostration, which is very apparent. Continue stimulants and give a tablespoonful every 2 hours of the following: ℞. *Tr. catechu*, ℥j.; *cretæ prep.* ʒj.; *tr. opii.* ʒj.; *aquæ*, q. s. ℥iv. M.

April 18th.—Rested badly; seven stools in the last 24 hours; large and watery; decubitus on the back; pulse 100, feeble; tongue continues very dry; mind rational, but dull; mouth and throat very sore, and can detect mercurial fetor in the breath; features sunken; skin warm and dry; thirsty, and desires acid drinks. ℞. *Plumb. acet.*, gr. xxiv.; *pulv. opii.*, gr. ij. M. Ft. pil. xij. S. One pill every 2 hours. Continue stimulants and nourishment.

April 19th.—Bowels still very loose; took eight pills; extremities cold; skin dry; pulse very feeble, 120; is excessively prostrated; no cough; tongue dry and clean; urgent thirst; mind clear. Continue treatment, and give two teaspoonfuls of laudanum by enema.

April 20th.—Ten stools, very liquid, within the past 24 hours, but none since day-break; pulse less feeble, 104; decubitus on the back; countenance more life-like; is perfectly rational; no pain except a little straining at stool; desires acid drinks above all things; skin cool; cough has entirely disappeared. Ordered emp. canth., 6 × 6, to the abdomen. ℞. *Bismuth subnit.* ʒiss.; *pulv. opii.*, gr. v. M. Div.

chart. vj. S. One powder every 4 hours. Continue nourishment and stimulants, and give a little lemonade.

April 21st.—Only six stools since yesterday morning, smaller and more consistent; feels stronger; pulse feeble, 104; skin warm; blister red, and sore; appetite improving. Continue treatment.

From this time, the patient's bowels gradually resumed their natural tone; the appetite became re-established, the strength returned, and he was discharged cured, on the 8th of May.

There are several points of interest in this case, apart from the recovery from the apparently desperate condition into which the patient had fallen.

There was an unusual absence of the *rusty* sputa. The pneumonia, as demonstrated by the physical signs, had been intense for six days before the sputa became even discoloured, and then the rusty appearance only lasted about 36 hours, while the crepitus of resolution did not appear for some days afterwards.

Query. How do those, who make light of, or wholly discard, the *physical signs* as aids to diagnosis in diseases of the chest, and rely *entirely* upon the *general* symptoms, make a satisfactory diagnosis at all, in cases like this? This man had little or no cough, no expectoration, and no pain for several days after he was evidently very ill, and yet the feeble respiration, the dull percussion, and the crepitant rhonchus, the flat percussion, and intense bronchial respiration, following each other in regular succession, absolutely demonstrated the existence of pneumonia. Without these signs, the disease might readily have been mistaken for typhoid, or some other form of fever.

There was a peculiarity in the action of the calomel. Mr. Pearson, several years ago, described, in his work on Venereal Diseases, a state of things which not unfrequently supervened during a course of mercurial treatment, and which he called the *mercurial erythism.* The symptoms are great prostration, rapid, feeble pulse, cold, clammy skin, hurried respiration, and oppression at the precordia. These symptoms are unaccompanied by the usual specific effect of mercury upon the mouth, and are certainly due to its *poisonous* action.

Harnly took 130 grains of calomel in about six days, without any decided ptyalism, but he was almost as completely collapsed as a patient in the blue stage of cholera. This prostration cannot be attributed to the diarrhœa, for it came on before the bowels gave way, and seemed rather to be the cause than the effect of the diarrhœa.

I desire to call attention to the method of relieving the hiccough, viz : by applying a bandage tightly around the lower part of the thorax. This symptom, so ominous of the sinking stage, and so exhausting in itself, depends upon spasm of the diaphragm, whose attachments are chiefly to the ribs and cartilages. If the bandage is drawn sufficiently tight, the muscle is so relaxed that the spasm ceases, as a matter of course. I have seen this simple method relieve this distressing symptom repeatedly, after every other remedy had failed, and I commend it, with great confidence, to the attention of the profession. It will also be found to be a valuable aid in the relief of some cases of chronic vomiting, not dependent upon organic disease of the stomach.

Case XXXV.—*Pneumonia—Sudden Death from Supervention of Phrenitis—Post mortem.*—Warren, æt. 35, single, blue eyes, dark hair, remarkably muscular, and previously very healthy, entered April 25th. Was seized the day before with chill, followed by fever, and accompanied by pain at the epigastrium, cough and mucous expectoration. He is a resident of the Eastern Shore of Virginia, and last fall had a mild attack of intermittent.

Present Condition.—Very pallid, and bathed in cold perspiration; respiration hurried, almost panting; complains of general soreness, and deep inspiration gives pain at the epigastrium; pulse 124, small and feeble; back and limbs ache; bowels were moved last night; tongue moist, clean and very pale; thirsty; anorexia; cough dry and hacking; countenance distressed and anxious.

Physical Signs.—Percussion dull over lower lobe of right lung behind; clear at the summit, and flat over middle lobe : clear throughout left lung. Respiration in left lung puerile; crepitant rhonchus just commencing in lower lobe of right lung; bronchial respiration over middle lobe, and puerile at summit. First sound of heart indistinct and confused; second sound distinct but not clear or natural; action of the heart laboured.

Patient's intellect is clear, and he has no headache; he is evidently laboring under chill, and probably had a paroxysm yesterday. Ordered 10 oz. of blood to be taken by cups from the lower part of the right lung, as soon as reaction comes on. ℞. *Quiniæ sulph.*, gr. xv. Chart. iij. S. One powder every 2 hours. Sinapisms and warm drinks.

April 26th.—Bowels frequently disturbed during the night, which made him rest badly; pulse 108, full and soft; respiration still very rapid and oppressed, 45; face flushed; skin warm and moist; cough urgent and dry; no appetite; thirst; tongue as yesterday; no pain; physical signs unaltered. ℞. *Tart. emet.*, gr. ij.; *syr. scillæ*, ℥ss.; *tr. opii.* ʒj.; *aquæ*, q. s. ℥iv. M. S. A tablespoonful every 2 hours.

April 27th.—Did well all day yesterday. The steward visited him at 9 o'clock last night, when he found he had not eaten supper; he was, however, perfectly rational, and nothing was remarked about him peculiar, except that he seemed disposed to pick at the bed clothes. He took a dose of his medicine and the steward left him doing apparently as well as he had been all day. At 11 o'clock, he was waked by the patient next to him, and hearing the clock strike, voluntarily got up and took a dose of medicine and urinated. He was then perfectly himself, and apologised for urinating on the floor, saying he had been dreaming, and thought he was doing it over the side of his vessel.

In less than half an hour from this time, he became perfectly frantic—tore the covering off his bed—broke everything he could find—attempted to pull the other patients out of bed, and, in fine, became so vicious and so utterly unmanageable, that it was found necessary to lock him up in a small room adjoining the ward. During all this time he was as white as a sheet, bathed in a cold sweat, and breathing very hurriedly and with great difficulty. About half an hour after he was locked in—a servant watching him all the time—he suddenly became quiet, and laid himself down on his face. He was immediately removed into the ward, and died in five minutes, just five and a half hours after these symptoms came on.

Autopsy Eleven Hours After Death. Head and Thorax only Examined.—The body measured six feet, and I have seldom met with so muscular a subject—looks as if he had been an entire stranger to disease all his life. There was a great deal of cadaveric ecchymosis on the back and limbs. Vessels of the scalp congested; dura mater natural; arachnoid thickened and opaque; no newly effused lymph upon its surface; vessels of the pia mater turgid with blood; on cutting into the cerebrum found every portion of its substance exhibiting marks of intense recent inflammation; every incision being thickly studded with minute red points; ventricles contained each about two drachms of bloody serum; texture of the cerebrum natural. The cerebellum exhibited scarcely any traces of recent inflammation, but the pons varolii and parts adjacent were atrophied and preternaturally soft.

In the thorax, the right lung was firmly adherent, by old lymph bands, to the walls of the chest anteriorly, and both lungs and pericardium were attached to the diaphragm so firmly that they could not be separated except by dissection. The left lung was healthy throughout. The upper lobe of the right was healthy; the middle nearly solid from tubercular infiltration; the tubercles were in various stages of development, there being here and there a small vomica, and the whole parenchyma being entirely unfit for the purposes of respiration. The whole lower lobe was greatly engorged, exhibiting the usual appearance of pneumonia in its first stage.

The heart was hypertrophied one third; flattened; very fatty, with soft texture; in the right ventricle was found a fibrinous body, of old formation, perforated in several places by the columnæ carnea, filling up a large portion of the cavity, passing thence into the auricle, and a prolongation extending into the pulmonary artery; the left ventricle, auricle, and the aorta were occupied by a similar concretion; the pericardium was thickened, and contained eight ounces of serum; all the valves of the heart were in a healthy condition.

How singular are the freaks of disease! Here was a man, remarkable for his good health, of fine muscular development and robust constitution, who had performed the laborious duties of a seaman, without inconvenience, for years, and yet dying from inflammation of the brain. His lungs and heart were found in such a condition as to make us wonder how he had lived at all.

ART. II.—*A Case of Popliteal Aneurism Treated With Apparent Success by Compression—Return of the Disease—Re-application of Compression Without Benefit— Operation and Recovery.* By J. F. PEEBLES, M. D., Petersburg, Virginia.

John Ambrose, aged 40, carpenter, full habit, above medium size, light hair and complexion, habits rather intemperate, consulted me in September last, for what he considered rheumatism of the knee joint, which had confined him to bed for several weeks, and which latterly had become very painful.

A glance was sufficient to convince me of the error under which he was labouring with regard to the nature of the complaint. It was an aneurismal sac, distended, evidently, to its uttermost limits. The skin over the tumour was glistening from its great distension, and some idea may be formed of its magnitude by the fact that pulsation could be felt quite up to within an inch of the patella on either side. The leg was permanently flexed, and from the popliteal space bulged out a large, convex, firm, but pulsating sac, which sent its prolongations in every available direction, extending, as has been said, upwards quite to the capsule of the joint, around the patella. Under the idea that it was rheumatic inflammation, the patient until this time had treated his case himself, using relaxing local applications, and he was only induced to get medical advice on account of the sudden and severe fits of pain, which had latterly began to annoy him, and which were always increased by his poultices and hot baths.

The case had the following history. In the preceding month of June, a long and very heavy beam of timber, one end of which he was lifting, by some awkwardness of his assistant, unexpectedly fell on his foot, which, by a sudden and powerful effort, he extricated without material injury. Six weeks after that time, he awoke conscious of some uneasiness under the knee, and in the centre of the popliteal space, he felt, for the first time, a small enlargement. This progressively increased in volume until the time I saw him, which was five months after its first recognition. Fits of pain in the tumour, slight and infrequent, had appeared about six weeks previously to my visit.

These had steadily increased, both in violence and in frequency, and I found him suffering attacks about once an hour, and oftener, if he made effort, or became in any way excited. His agony during their existence, seemed almost insupportable.

The treatment by compression was at once resolved upon, although it was believed that the immense size of the sac would be likely to interfere with its success. Indeed, upon examination of the authorities at hand at the time, I could not find where this method had ever been employed in so large an aneurism. The semi-circular bar and padded screw, figured in Professor Millar's Surgery, was the instrument employed. From its first applications the tormenting pains ceased. He wore the instrument, in all, four hours the first day. The subsidence of the pains, and a perceptible decrease in the tumour accompanying it, gave the patient hope, and he courageously resolved to persevere.

A degree of compression sufficient to weaken the current to the requisite extent, he could tolerate two hours, after that, he was compelled to move the pad over a fresh spot. As has been recommended, we procured another instrument. With the two properly adjusted for him, he could himself manage to keep one in use during the day, for he soon learned, by observing the perturbations of the tumour, how much pressure to put on. With all our management, however, such was the delicacy of his skin, he could only contrive to average eight hours out of 24, of interrupted compression. But the tumour progressively diminished, and every day afforded fresh encouragement for the continuance of the treatment. At the end of the fourth week, the sac had subsided down within the popliteal space, and was very firm, with a pulsation barely perceptible. Indeed, in the morning, when the instrument had not been used for the night, it could not be felt, yet after wearing it for awhile, upon its removal, a feeble perturbation became perceptible. About this time, the patient called my attention to a more distinct pulsation around the verge of the external margin of the sac. After examining this for several days, it was concluded that it arose from a new artery, which had been formed around the sac, out of an anastomosing branch, an opinion I afterwards changed, but which ultimately proved to be correct. In one week more, every trace of circulation was extinct in the sac, and it existed as a firm, solid mass. It still filled the popliteal space, and so embarrassed the joint, that the leg, although greatly improved in that respect, could not be entirely straightened.

The instrument which had been used five weeks, was now removed, under the impression that the aneurism had been obliterated, and that complete recovery would follow when time sufficient had elapsed for the absorption of the coagulum. Farther treatment being abandoned, Ambrose went into the country to recruit, using his crutch to get along. Three weeks afterwards, when he still appeared to be improving, in turning in bed he felt a sensation in the sac, darting through it from side to side, as though something had given away. He immediately perceived that he could, for the first time, now straighten his leg perfectly; but he also found that pulsation had returned in the tumour, which at once began to enlarge. He came home and reapplied compression. Finding, that although by stopping the current in the artery, he arrested all pulsation in the sac as before, yet the tumour, after 10 or 12 days trial, had if anything, increased in size, he sent again for me.

I found the aneurism very nearly its former size, all its firmness had disappeared, and a fluctuating pulsating tumour was again presented. I could not find the anastomosing branch, as the sac overshadowed it, and I concluded that I had been mistaken; that this pulsation felt at its verge, was owing to a current around the coagulum which filled the centre of the sac, the bursting of which had reproduced the disease. I advised a continuance of the compression, and superintended its application. The tumour did not increase any further in size, but not the slightest impression could be made upon it, although the compression was faithfully continued six weeks. It was then abandoned and an operation determined upon.

The obstinacy of the tumour under the re-application of compression excited apprehension, with regard to the success [illegible]he [illegible]ature in this case. It was thought possible that the treatment had altered the channels through which the tumour was fed, by creating new arteries around it, in such a way that the tying the main branch would not be effectual. It was thought probable that it was in this way that the re-application of compression had failed. Such a state of things, it is obvious, might prove a serious objection to the modern plan of treating aneurism, inasmuch as in cases it did not cure, it might in this way seriously embarrass the success of other measures. But our conjectures were groundless, and it was found that no such objection to this really beautiful mode of treating the disease was furnished by this case. The ligature was applied on the second of May last. The usual spot just above the overlapping of the sartorius was selected. The patient was put under the influence of chloroform by Dr. Smith, and there were present at the operation, Drs. White, Claiborne, Madison, Gilliam, and Mr. Baird, a student. On the succeeding day, the œdema, before existing in the leg and foot had subsided, and there was not at any time the slightest alteration in the temperature in any part of the limb. The aneurismal tumour was still. On the first dressing, it was found that three fourths of the incision had adhered. The ligature came away on the 28th day. Nothing unfavourable occurred in the case, and the sac progressively diminished. A month ago, Ambrose threw aside his crutch, and now walks as well as ever. There is only perceptible a condensation of the tissues about the popliteal space, which is diminishing. Around the external margin of the late sac, the new artery is now plainly developed, it being apparently the full size of the main branch.

The several features of this case—the great size of the sac—its behaviour under compression, and its final ready cure by operation, I have thought, gave it sufficient interest to warrant its publication.

Art. III.—*Lactation in an Old Woman.* By E. Warren, M. D., Edenton, North Carolina.

I desire to add another instance to those already recorded, of abnormal lactation [illegible]th of which can be substantiated by the testimony of many respectable persons in this community.

Mrs. W., aged 55, who has long experienced bad health, and whose catamenia ceased many years since, received into her house, about 18 months ago, the child of a mother who died two days after labour.

The infant was very feeble and fretful, and as a means of keeping it quiet, Mrs. W. got into the habit of putting it to her breast.

After continuing this practice regularly for six months, she was one day surprised to find the child sucking away as if it really were enjoying a repast of maternal milk. On examination, she found her mammæ distended, and filled with a fluid possessing all the properties of ordinary milk. All other nourishment was immediately suspended, and the child raised entirely on the pabulum thus wonderfully supplied. Up to that period, it had been extremely delicate, but as soon as it commenced with this new article of diet, it recuperated rapidly, and is now a vigorous child. The supply of milk continues, but the quasi mother is beginning to think about weaning her child. The illiterate of the neighbourhood, look upon the whole thing with superstitious wonder, and believe that a miracle was performed for the preservation of the life of the child.

It was certainly strange, that a woman so well advanced in years and of such an enervated, impaired constitution, should furnish a supply of milk so wholesome in quality, and so abundant in quantity, to the child of another person.

It is but another proof, however, of the wonderful adaptability of nature to every possible emergency, and an additional evidence of the power and goodness of that Providence which "orders all things for the best."

ART. IV.—*On the Complications of Scarlatina.* By ARMAND TROUSSEAU, Clinical Professor of Medicine at Hôtel Dieu of Paris.

Among the complications of scarlatina, there are some which are of the gravest character but fortunately of rare occurrence, and others which are frequently present, but which only occasionally assume a serious aspect under the influence of causes which we do not understand very clearly. Hæmaturia and albuminuria, though very common, may so differ in intensity as to be quite insignificant, or else to be the cause of speedy death.

Of all of these complications, angina is undoubtedly the one which demands the most attention. A person rarely has scarlatina without angina; it is probable, indeed, that in the cases which are considered exceptions to this rule, the angina was mild and passed unnoticed rather than that it was absent. This law is particularly striking during the season of an epidemic; sometimes, at such periods, the eruption is altogether wanting, and the sore-throat alone announces and characterizes the disease. It is, therefore, extremely important to distinguish scarlatinous angina from all other forms of sore-throat, which have many symptoms in common with it, though their origin and termination is totally different.

Scarlatinous angina is characterized, in the first place, by the violence and suddenness of its symptoms. From the onset there is a sensation of stiffness and remarkable tension about the muscles of the neck; the movements of the palate and half-arches are painful or even impossible; the voice is hoarse; and, lastly, the tongue, the mouth, the isthmus of the fauces and the throat, are red, livid, shining, and intolerably dry the pulse acquires great frequency. In catarrhal and phlegmonous angina the same symptoms are noticed, only in a less degree, and it is especially to be noted that the phenomena accumulate with less rapidity in purely inflammatory angina, which, moreover, terminates in eight, nine, or twelve days, by resolution or suppuration, while in scarlatinous sore throat, on the fourth or fifth day, spots of a whitish, viscous, exudation appear on the soft palate and tonsils, and presently unite so that the fauces are soon entirely covered. This pathological exudation does not commence in a circumscribed point; the nasal fossæ, the tonsils, and the pharynx, are simultaneously attacked. This fact has its importance, as we shall see hereafter, in the diagnosis of diphtheritis and scarlatinous angina. We should observe farther, that this affection has usually no tendency to extend to the larynx, and that if symptoms of suffocation supervene, they depend on the swelling of the tonsils and isthmus of the fauces, and not on any lesion of the laryngotracheal tube.

While the throat is thus attacked, the glands of the neck swell, and form a necklace of hard and painful lumps among the cervical muscles. The neighbouring cellular tissue becomes inflamed in its turn, and a tumour forms under each ear; the skin is tense and red, and an erysipelatous tint extends to the surrounding parts. The febrile reaction becomes more intense; a burning heat pervades the body; there is great restlessness and often violent delirium. The exudation in the pharynx is now modified; the patches become soft and grayish; sometimes they are yellowish and even brown, when stained with blood from the swollen subjacent mucous membrane; a fœtid ichor flows from the mouth and from the nostrils. Everything seems to indicate that the parts which are the seed of disease are gangrenous, and that the portions of soft, grayish, infected matter, which separates on the slightest touch, are the remains of sphacelated tissues. But in reality there has only been a formation of false membranes. When the patient recovers, and the swelling disappears, everything resumes its primitive aspect, and we find that there has been no loss of substance in the organs about the throat. It is an admitted fact that gangrene is exceedingly rare in scarlatinous angina, and only occurs in children who have suffered greatly, who are much debilitated, who have long lain in the wards of asylums and hospitals; in these cases, gangrene steadily extends to the cellular tissue of the cheeks and lips, and the patient dies. The condition of the inflamed glands is aggravated as the disease of the organs to which they correspond, progresses; suppuration succeeds to that phlegmonous inflammation which we have described. The skin of the neck is perforated by numerous sinuses, through which are evacuated large quantities of pus mingled with whitish fibrous shreds, the remains of gangrened aponeuroses or cellular tissue. You readily understand the gravity of this state of things. The patient, enfeebled by scarlatina and angina, is exhausted by excessive suppuration. The vast abscesses on either side of the neck are exposed to the contact of the air; the pus becomes sanious, rigors supervene, hectic fever comes on, and the patient dies in marasmus.

Happily, scarlatinous angina has usually a less disastrous termination. But, although it always possesses characteristics which distinguish it from other pharyngeal inflammations, cases occur, as we shall see hereafter, in which it is difficult to avoid error. Scarlatinous sore-throat is perfectly distinct from diphtheritis, too, although both are characterized by an exudation in the throat. Diphtheritis is remarkable for three peculiarities: the fever at the commencement is slight, and amounts to nothing when compared with the gravity of the impending disease, or to the violent febrile re-action which accompanies the invasion of the sore-throat of scarlet-fever; instead of commencing by an exudation occupying a large portion of the throat, it begins on a circumscribed point; a grayish spot appears on one tonsil most commonly, and extends steadily, but slowly as a general thing, to the other parts of the pharynx. Frequently, before the exudation is discovered, it has covered the deep-seated organs of the pharynx, and when something induces the physician to examine the fauces, he finds it entirely encrusted with a pearly, plastic, exudation, which does not assume a spongy and grayish aspect until it has been exuded for some time, and undergone alteration. Lastly, a distinctive sign, to which M. Bretonneau justly attaches great importance is, that diphtheritis has a constant tendency to invade the air-passages, to descend into the laryngo-tracheal tube, and form *true croup*. These three characteristics: the exudation commencing by a single spot which extends progressively, the slight pyrexia, and the fatal tendency to invasion of the larynx, invariably attend the development of diphtheritis. Often, we are only warned by a slight soreness of the throat, to which the patient, if an adult, pays no attention, and of which children scarcely complain. It was thus that a young Spanish lady died in January last; after tending to the end her child who died of croup, she was affected with slight sore-throat, and when she summoned a physician, she was herself hopelessly ill with the same disease. In diphtheritic angina, the glands are also involved secondarily, but they are less swollen than in scarlet fever, and it is the sub-maxillary, rather than the cervical, glands which are usually attacked. The nature of the exudation varies somewhat: it is creamy, pultaceous and whitish in scarlatinous angina; in diphtheritis it rather resembles the buffy coat of the blood. But these distinctions, which are available at the onset, are valueless when the contact of the air has modified the product, and when diphtheritis has thrown the organism into profound disorder analogous to that produced by scarlatinous angina. The distinction arising from the dyspnœa which accompanies the invasion of the larynx by diphtheritis, loses much of its importance when the tonsils, palate and uvula are swollen greatly, for inspiration is certainly as difficult under these circumstances as when the larynx is clogged with false membranes. The indications deduced from the state of the cerebral symptoms are more valuable. Diphtheritis causes no disorder of the brain at its onset, while scarlatinous angina is constantly attended by great restlessness or by delirium. The delirium sometimes ceases when the inflammation subsides, and returns towards the close. But *then* it is not a differential sign, it is a symptom of prostration, a phenomena common to all diseases which have produced profound alterations in the organism.

Notwithstanding these distinctions, the differential diagnosis of scarlatinous angina and other forms of sore-throat often involves the greatest difficulties, unless the cutaneous eruption is present to indicate the origin of the disease. Therefore, when you meet with any case of extremely violent angina, you should seek in the neighbouring parts for some traces or vestiges of scarlatinous disease. I say in the neighbouring parts, for you know that scarlet-fever, particularly during a season of epidemic, often appears without any red eruption on the skin. It frequently happens that in a family in which scarlatina has made its ravages, a number of individuals will escape the epidemic, but, of this number, some will be taken without any external manifestation, with one or another symptom of the disease. One will have an attack of albuminuria, another an hæmaturia, a third angina alone; and, in these cases, the single symptom will often present a violence and gravity which is rarely seen where scarlatina displays its full array of symptoms.

There is a symptom of scarlatina which has received little attention, and which nevertheless is not without importance; it consists in a sort of stiffness of the hands, which makes any flexion of the fingers uncomfortable. The tumefaction of the hands in variola, which Sydenham first described, appears, you know, about the thirteenth day; in scarlatina the stiffness we have mentioned appears on the second or fourth day, and it is often the only indication that an albuminuria or angina which has appeared suddenly, without precursory symptoms, belongs to the order of scarlatinous disease.

Scarlatina is often complicated with intense articular pains; in epidemic seasons these are often the only symptoms of the exanthem. These pains, after attacking one joint after another like rheumatism, settle somewhere, and suppuration takes place, or else they persist after the eruption has disappeared, and torment the patient for a long time.

The gravity of scarlatinous sore-throat has no relation with the extent of the eruption; mild scarlatina is often attended by violent angina, and *vice versa.* Sometimes angina appears in the desquamative stage; the fever lights up again, the pulse acquires great frequency, the pharyngeal organs become almost instantaneously enormously swollen, the patient falls into a kind of a prostration, the respiration is noisy and sonorous, and before the angina has passed through all its stages, the patient dies.

Albuminuria is one of the most frequent complications of scarlatina. It must not be confounded with Bright's disease; there is a capital difference in the two affections; there is every chance of recovery in the one and none in the other. Albuminuria is so common in scarlet-fever, that we may assume that it attacks a third of those affected with this disease; such is the calculation of an eminent military surgeon; it is more common, however, in children than in adults.

Albumen appears in the urine of patients with scarlatina, with all the other elements of the blood, and its presence has no other significance than theirs. Sometimes, in the convalescence from scarlatina, the urine assumes a rose tint instead of that amber-coloured and sedimentous aspect which it presents at the termination of almost every grave disease; after it has stood awhile, streaks of blood settle towards the bottom of the vessel; or else it is more highly coloured, and a true hæmaturia exists; or it may be quite dark from the influence of blood which has remained sometime in the bladder; or of a sea-green colour, containing the serum of the blood alone; or of a perfectly normal aspect, and yet albuminous. This albuminuria usually disappears of itself, but it may be transformed into true morbus Brightii.

The presence of albumen in the urine should put us on our guard against convulsions. Women in the period of gestation, of whom one in six, at least, has albuminuria, are very subject to eclampsia, and children have the same predisposition when albumen is passed off from the kidney. Albuminuria is frequently complicated with anasarca, which usually commences about the face, and extends to the rest of the body, often causing grave disorders. If the œdema attacks the roots of the bronchia, a difficulty of respiration supervenes, which may even progress to suffocation; or the epiglottis may swell and block up the entrance to the air-passages.

When scarlatina in children is complicated with articular pains, the heart usually becomes involved, and chorea is often a secondary result.

The coryza of scarlatina appears much later than that of measles, usually towards the seventh or eighth day. It holds on with remarkable tenacity. From the nasal fossæ, the inflammation extends to the eyes and ears, and obstinate conjunctivitis and otorrhœa is the result. The ossicles often become necrosed and disarticulated; the *os unguis* is attacked by caries and produces an obstinate fistula. Eczema sometimes appears on the vulva, scrotum and thighs; it produces terrible itching, which is exasperated by the slightest touch.

LECTURES.

I. *Lectures on Fever*. By William Stokes, M. D., Regius Professor of Physic in the University of Dublin.

Lecture VI.

Before we enter on the examination of some of the leading facts relating to the local diseases of typhus, I wish to say a few words more on the subject of contagion.

You are to understand that, while we believe in the contagious nature of fever as an established fact, we do not go the length of saying that, all cases of fever originate by contagion. In the present state of knowledge, we must, I think, admit that certain combinations of physical circumstances may produce fever, either in a single case or in masses of men. It is hardly possible to gainsay this; but it is at least as well if not better proved, that this fever is capable of being communicated by actual contact, or by vicinity, from one individual to another.

If we look to other diseases which affect the whole economy, we find analogies between them and fever; so far, at least, that in them a morbid condition exists which reveals itself in two ways: one, a state of general ill-health; and the other, the production of local and specific alterations. Take, for example, tubercle and syphilis.

The last of these is, at all events, contagious; and though we cannot now show any mode of its production, except communication from one person to another, yet we must believe that, at one time, causes independent of such a mode of communication did exist, and were capable of originating the disease; and it may be, that as the world advances, and the general exciting causes of fever are diminished, or perhaps removed, this disease too, like syphilis, may only be produced and exist by means of its communication from one person to another; and we may hope that such a state of things would be a step to the extinction of fever, at least as a disease affecting communities of men. If it be true that we may admit two phases in the history of acute essential diseases, one in which they are not only communicable, but capable of original production by causes independent of contact with the sick, and the other when these latter causes cease to operate, and the disease is reduced simply to a special condition, which can only be communicated by contact, it is easy to perceive, that, so far as prevention and ultimate extinction are concerned, the difficulties attendant on the matter will be greatly diminished. Let us assume, that, so far as the cessation of the operation of general external causes is concerned, variola and syphilis are similarly circumstanced, and we may hope, from what has occurred with respect to small pox, that a similar diminution of fever may yet be attained, when it has at last passed into the condition of a merely contagious disease.

With respect to those causes which may be held to be capable of exciting fever, irrespective of contagion, I have only to say that as yet we know but little about them; and we have the highest authority for believing that the origin of epidemics is one of the most obscure and difficult subjects in the whole range of physical enquiry. But I cannot help expressing my belief that too much stress has been laid upon the effects of miasmata resulting from imperfect drainage, or the want of ventilation and of public cleanliness in general. No one will for a moment suppose that I wish to teach that these influences do not act in deteriorating the physical health and moral condition of a people, and in thus increasing the mortality of any existing epidemic, and that their removal is not an imperative duty of every government and community; but the question before us is, are these influences in this country the sole or the chief causes of typhus fever? I do not believe that they are, because in Ireland, not only in the isolated dwellings of the poor which are scattered over the face of the country, but in the towns also, all those causes which result from the imperfect drainage of dwellings, from the accumulation of decomposing organic matters in their vicinity, and from imperfect ventilation, are, I regret to say, but too constant and too general; and yet the production of fever, whether sporadically or epidemically, is inconstant and irregular in the highest degree. Why should these causes produce fever at one time and not at another? Why should districts remain for years free, or comparatively free, from fever, while the supposed exciting causes remain in full force? or, again, why, if the cause be constant, should the epidemic character of the fever vary? We may say, excluding the consideration of isolated cases, that each epidemic has a special or predominant character; thus, the great epidemic of 1827 and 1828 was very different from the epidemic which preceded it in 1818, and those which followed it in 1836 and in 1847. It was in the epidemic of 1827–28 that we observed the almost universal prevalence of the secondary disease of the intestine; perforations of the intestinal tube were common; and yet, since that period, such an accident is rarely met with, either in the fever itself, or during the period of convalescence. It was at that time, too, that those singular and fatal cases of yellow fever to which we have before alluded occurred intercurrently. In this fever, too, termination by well-marked crisis was commonly observed, a circumstance which is comparatively rare in the epidemics of maculated typhus in this country.

I do not put forward these views as in any way original, for Doctor Graves long held the opinion, and taught it in this theatre, that something more than the effect of local causes, as the term is commonly understood, was necessary to explain the occurrence of epidemics in Ireland. Let me read you a quotation from his seventh lecture, one of those devoted to the consideration of fever:—"that fever, in Ireland at least, depends on some general atmospheric change which affects the whole island simultaneously, independent of situation, aspect, height above the level of the sea, dryness or moisture of the soil, or any other circumstance connected with mere locality, is proved by the fact, that when typhus begins to increase notably in the Dublin Hospitals, we may always rest assured that a nearly simultaneous increase of fever will be observed at Cork, Galway, Limerick and Belfast. For a considerable period there was a great tendency among physicians to refer the origin of typhus, and almost every variety of fever, to malaria or unwholesome emanations from the soil, produced by the decomposition of vegetable matter. In Ireland, facts do not bear out this hypothesis, for, as already stated, when an epidemic of fever has become established, it breaks out simultaneously in situations the most different, and in some, where no such emanations can be supposed to exist; thus I have seen a whole family affected in the telegraph, situated at the summit of Killiney, a mountain formed of hard granite; and, indeed, the granite districts beyond Rathfarnham, Tallaght, and Killikee, supply the Meath Hospital with its worst cases of typhus." Further on he observes:—"Although ready to allow the general improvement of the health of the public from improved drainage, improved habits of cleanliness, and increased comforts, yet I cannot admit that in Ireland we are to expect any notable diminution of fever from the operation of these causes. In making this statement, you are aware that I am opposing the usually prevalent opinion. The grounds for my dissent have been partly explained to you already, for, according to my observation, the increase or diminution of fever in Ireland arises from some unknown general atmospheric or, if you will, climatic influence, quite independent of locality, and consequently the most improved and thoroughly drained towns and country districts are quite as liable to epidemics of typhus as are the most neglected and marshy parts of our island. The causes which occasion these epidemics are, on the other hand, in no way connected with the notable variations of the seasons, for, with us, the ravages of typhus are observed sometimes in dry, sometimes in rainy seasons, and its epidemics appear quite uninfluenced by the cold of winter, or the heat of summer."

What I wish you to believe, gentlemen, is, as I have already stated, that our fever is both epidemic, as proceeding from general but unknown causes, and also contagious; and no one can deny that causes, which would act in depressing the health and moral energy of a people by rendering them less able to resist the effects of disease, would increase the general mortality. The influence of bad ventilation and overcrowding I need not here dwell on; nor, on the other hand, need I occupy your time with more arguments to establish the truth of the doctrine of contagion. You will find in the writings of Dr. Christison and Dr. Graves, convincing evidences on these points; and let me again refer to the great argument drawn from the liability to contract fever which has so long been observed among the medical practitioners of Ireland.

Before I leave this subject, I wish to recall to your memories the calculation made by Bishop Brinkley, the results of which were so strongly in favour of the communicability of typhus. They went to show, that an overwhelming number of chances would exist against the occurrence of a certain event, such as the sickening of eleven out of twelve of a family, in a particular district, if the sickening of one did not promote that of another, or, in other words, if the disease were not contagious. On this subject I have had the honour of receiving a letter from Dr. Paget, of Cambridge; and I would not be doing justice to you, or the question generally, if I did not state the objection made by this eminent physician, as to the soundness of the conclusions in favour of contagion, which appear deducible from these calculations. Dr. Paget observes that the form in which the problems are stated, excludes the consideration of all local influences, except contagion; in this he is perfectly correct, for the element of local influences was not presented in the questions given to Dr. Brinkley for solution; and for this reason, that the framer of the questions was not a believer in the effect of these local influences in causing fever. Yet we must agree with Dr. Paget, that had this element of local influences, besides contagion, been included, it must necessarily have diminished, by whatever was its real value, the overwhelming result which the calculations, as they now stand, give in favour of contagion. But, even if we give a value to this cause which would diminish the numbers—say, even by 100,000,000—it would still leave the chances against the event, on the non-contagion theory, not less than 89,000,000 to 1,—a result more than amply sufficient to confirm the doctrine of the communicability of the disease. But even Dr. Paget himself admits, that, taking the case of the second calculation, if the consequence of these deductions on the score of local causes were to reduce the probability of 300,000 to 1 to that of 1000 to 1, yet this latter probability would be sufficient to carry conviction to the mind of any candid person. He, however, observes, that we have unhappily no means of estimating numerically the requisite deductions, no means of calculating the effect of noxious exhalations from decomposing organic substances, of bad food, and other assignable causes, which have been supposed capable of promoting the spread of fevers; and he properly remarks, that Dr. Brinkley's results include, with contagion, the possible effects, not only of known, but also of unknown causes, which may make an individual household more liable to fever than their neighbours. I entirely agree with Dr. Paget, that, as an argument for contagion, the results of Dr. Brinkley's calculations must be taken minus the effect of local influences; and I feel indebted to him for having drawn my attention to this point, and to the importance of noticing it, when the numerical value of these results is considered. My opinion, however, as I have already stated to you, is that, in Ireland, local influences have not that great importance either as generators or promoters of fever which some believe them to have, and, consequently, the deductions to be made in favour of these causes would not greatly weaken the general results. We must believe that the causes of fever, independent of mere contagion, are various in the extreme, that they are probably numerous and complicated, acting in combination rather than singly, and varying in their effects, not only in consequence of their own properties and combinations, but also as regards the condition of the individual in whom fever is developed. To this point I have already alluded in a former lecture, in speaking of the influence of the same contagion on individuals of different countries. And Dr. Paget, in observing that our pathology of fever is not so perfect as to assure us that there are no predisposing causes besides those which are commonly allowed, notices the comparative immunity of infants and persons above forty years of age from the typhoid fever with rose spots, and affections of Peyer's glands, etc., indicating that the constitution of the individual is an element in the qestion.

Let us now return to the consideration of the local diseases of fever. We have already seen that the existence of local symptoms in fever does not necessarily imply the existence of any known anatomical change. A man may have pain and delirium without cerebritis, cough and dyspnœa without pneumonia, vomiting, purging, and meteorism without enteritis. To learn this point is to advance a great way in our knowledge of fever and its treatment. On the other hand, observation during life, and *post mortem* inspection, prove that local diseases involving alterations of structures, such as thickening, softening, vascularity, effusions, ulcerations, and gangrene, may be produced in various organs during the course of a fever.

Now, the great point in practice relating to these changes is, that they are symptomatic of the fever, secondary to the fever, and, in all probability, under the same law of periodic action as the general malady itself. They do not appear to begin with the fever, but they arise after it has existed for a certain time. There is the greatest variety in the period of their occurrence, and in their combinations; they may, as I have just now said, spontaneously subside with the fever; they may interfere with its critical termination; and, in certain cases where this does not occur, and when the general character of typhus disappears, progressive disorganization may go on in the structures which have been already affected.

In what way are we to consider the nature of these secondary affections in typhus fever? It appears now pretty well established that, in the follicular intestinal disease of the Continental fevers, there is a special typhus deposit, which, at least in the cases of recovery, is under the law, first of a progressive, and then of a retrogressive influence; just as in variola we observe the progressive maturation and absorption of the pustule. Recent pathologists have applied this principle to many other of the local diseases in typhus; and although the existence of a special deposit is not yet so well or so fully established in the case of thoracic and cerebral diseases, or at least in the case of parenchymatous as compared with membranous structures, still we may, with a good deal of safety, believe that an action more or less analogous to that which occurs in the glands of Peyer and Brunner though perhaps not so perfectly developed, may be assumed to occur in all the secondary diseases of typhus which are not purely neurotic.

In speaking of a specific deposit in the secondary diseases of typhus, I do not wish it to be understood as intending to convey to you the impression that this deposit presents any definite characters whereby it can be distinguished from other morbid products; for, even with the aid of the microscope, we cannot discover any special distinctive characters in the deposit found in the follicular disease of the intestine, or in other forms of the secondary affections of typhus. It was at one time believed that the so-called "massa typhosa" did present special, distinctive, histological elements; but more recent research has shown that these views are erroneous. Still it is possible, that although we cannot determine the existence in it of any physical specific character, it yet possesses a vital specific character. Let us illustrate this by referring to two specimens of pus,—one taken from the pustule of variola, the other from an ordinary abscess; histologically they will appear similar, but that they have separate vital characters no one can entertain a doubt. But other conditions are found associated with this typhus deposit, or occurring when we cannot demonstrate its existence. Under this head we class many of those appearances which are described as inflammatory, such as redness, softening, tumefaction, etc. Some have supposed that these states indicate a re-active inflammation, and that such does often occur, especially in the intestine, is abundantly proved by the researches of Rokitansky and others. I think it, however, extremely probable, that, in certain structures or organs, as, for example, the lung, these appearances of inflammation may precede or accompany the typhus deposit, or that they may occur even without such a deposit at all; and I think it likely that the liability to actual typhus deposit is much less in the lung than in the intestinal glands, and greatly less in the brain and nervous system generally than in either the thoracic or the digestive systems. Were it otherwise, typhus and typhoid fever would be much more fatal diseases than they are, death being produced in the one case by coma, and in the other by asphyxia.

But, even though he may not find, upon a close dissection, anything beyond the recognised appearances of inflammatory action spread over the surface of the mucous membrane, we are to believe that this condition, just like the typhus deposit, is secondary to the fever, and partakes of its specific character. You are not to believe that it is a simple idiopathic inflammation, nor is its existence to lead you into the deplorable errors of the antiphlogistic school, that Sangradoism of the nineteenth century which numbers more victims than the sword. This condition, however, although specific and secondary, still has some characters of irritation, or inflammation if you will; and this fact points to the adoption, in certain cases, of a practice which, to the mere theorist, appears inconsistent, namely, the use of local depletion to relieve the suffering organ, while, at the same time, we employ a general tonic and stimulating medication.

Let me, in conclusion, indicate to you in a general way the principal pathological conditions with which, in the treatment of a case of typhus fever, the practical physician has to deal.

First. We have the neurotic conditions, that is to say, conditions of functional derangement occurring without any known anatomical change. They may occur in relation to any of the organs; but they are, perhaps, more important, and certainly more frequent in the case of the nervous, than in those of the respiratory or digestive systems.

Secondly. We meet with intercurrent and secondary irritations or inflammations affecting principally the mucous membranes, less frequently the parenchymatous structures, and still less the serous surfaces. These irritations, although not associated, so far at least as we can discover, with any special deposit, are, nevertheless, of a specific character, and are under the influence of the laws which govern the general disease.

Thirdly. We have the condition now specified associated with, though probably for a short time preceding, the typhus deposit, just as we see in variola the vascularity of the skin to precede and accompany the vesicular eruption.

Fourthly. We may observe the typhus deposit occurring independently of any other alteration, and apparently not associated with any irritative process.

Fifthly. We observe the reactive inflammation supervening on the typhus deposit, which has been so well described by Rokitansky, and which may produce progressive ulcerations or even mortifications of the affected parts.

Lastly. There is a condition of softening of organs, upon the nature of which we have, as yet, no very definite ideas. In some instances, it seems to be produced by an interstitial deposit of typhoid matter; while in others it is difficult or impossible to prove the existence of such a deposit. This state of softening as we shall presently see, is one of great practical importance. Its influence upon the heart, as you all know, is most remarkable. Its existence in that organ demands special attention, and there is good reason to believe that the same state, when affecting others of the involuntary muscles, such as those of the air tubes, and perhaps also those of the intestinal canal, has an important influence on the symptoms and progress of the disease.

II. *Lectures on General Physiology*. By Professor CLAUDE BERNARD.

The science of physiology, as it is now understood, comprises the study of all the manifestations of life in living beings. As far as its object is concerned, it is coeval with all the sciences which are conversant with organised beings. It will be readily understood, however, that physiology, whose aim is the interpretation of the mechanism of life, has necessarily come after these sciences, because it requires their assistance; it has been preceded therefore by anatomy, or the study of the tissues, and by the physico-chemical sciences, or study of the circumambient medium. In consequence of this necessary and intimate connection between physiology, and anatomy, chemistry, and physics, anatomists, chemists, or physicists have, by turn, monopolized physiology, according as one or the other of these sciences predominated for a time. As chemical, physical, or anatomical doctrines have successively reigned supreme, physiology has been subjected to their influence, but while it has been perverted by the disciples of these sciences, history teaches us that it has been enriched by their discoveries. I do not intend to trace the history of these variations, or to show how physiology has become disengaged from other sciences and has attained independence. It is sufficient to know that at the present time this separation is an accomplished fact.

Physiology should be an independent science, for it has its own peculiar method of experiment. It will be our endeavour to explain this new method in its application to the phenomena of life; it is to it that we are indebted for the rapid progress which has been made in the science of life during the last few years; all the future of physiology is embraced in it. We shall therefore study the rules for its application carefully, but, in the first place, let me state what I conceive to be the domain of general physiology, the subject which we are to discuss in this course.

What is general physiology? Is it the entire or universal study of the assemblage of the manifestations of life, in their generalities and peculiarities; is it the consideration of living atoms? By following such a course, we should lose sight of the true end, and become bewildered in an infinitude of details. Shall we say that this science is the most general possible expression of the phenomena of living beings, or, with Burdacks, describe it as the "unitarian point of every generality?" Shall we torture our minds to discover the essence of life? to distinguish living beings from those which are not endowed with life? Shall we, finally, investigate vital forces under the triple point of view of *idealism*, *dynamism* and *mechanism?*

It suffices to reflect on the phenomena of life and on our present knowledge of them, to perceive the falsity of these general ideas. I say that these ideas are erroneous, because they confound biological and physical science with the moral and mathematical sciences, and apply the same method to all. We should ascend from facts to laws, and not attempt to deduce facts from laws which are not established as yet.

After reflecting on it, and weighing the matter by the severe and truly scientific criterion of our epoch, I have thought that general physiology could be most simply defined: A methodical exposition of the knowledge which has been experimentally acquired in regard to the phenomena of life.

It is impossible that our knowledge in this department should be derived otherwise than through experiment; like the chemists and physicists, we proceeed experimentally. While in courses of partial physiology it is proposed to examine particular functions in certain species, in general physiology we abstract all distinctions of species.

Now there are two general conditions which are requisite for a knowledge of the mechanism of life: 1. *The medium;* 2. *The organism.* Life is in neither one nor the other. Hence it is that physiology cannot dispense with anatomical, physical, and chemical science. These two conditions, medium and organism, are indispensable. Suppress either the medium or the organism and life ceases, for it exists only through their re-union. Life resides in the living organism, in the living molecule. That aptitude to live, which is indicated by vital acts, is a force peculiar to living beings; we must accept it, without attempting to define it; we must be content to observe its effects. Say, if you wish, that life is a property of matter resulting from the arrangement of certain molecules, and that the derangement of these molecules is death, this property of matter is not in the slightest degree elucidated by your definitions. Life cannot be defined, whether it be considered in the *molecule*, in the *organs*, or in the *individual.* It is only necessary to recall the different definitions that are extant, to be convinced of this fact:

That of the *Encyclopædie*—" Life is the reverse of death."

That of Bichat—" Life is the assemblage of phenomena which resist death."

What do these definitions affirm? Nothing; they simply oppose two expressions—life and death. For us, the object of physiology is to determine what are the manifestations which result from the contact of an organism and a proper medium.

Vital phenomena may be variously classified; we recognize in the first place: 1. The phenomenal manifestations; 2. The functional manifestations of life. There exist in living beings a certain number of phenomena without any object that is known to us, and general properties which enter into the combinations of the functions themselves. There are three orders of vital phenomena:

1. The purely vital phenomena:

Irritability,
Sensibility,
Contractility,
Secretion,
Nutrition and regeneration,

} Properties common to all living beings.

2. There are other phenomena which appertain to animals, but which are not their exclusive property. These are:

Endosmosis,
Diffusion,
Imbibition,

} These are the physical phenomena of the organism.

The physical and chemical phenomena of the organism are much talked of, and some persons imagine that they take place within living beings in the same manner as without; when we examine these phenomena under the influence of life, we find that they are modified. Look at *endosmosis*, for example, which at one time was supposed to explain nearly all the phenomena of life in vegetables, when we watch its operation in the organism, we find that it is irregular, that it has undergone modification. Two unlike liquids being separated by a membrane, two movements are immediately established, one of entrance, the other of exit. It is thought that the same thing will occur in the organism. To be convinced of the contrary, place an animal in contact with a solution of sulphate of soda; there will be on the one hand the saline solution, and on the other the blood of the animal, and the two will be separated by the walls of the vessels. Very well! we shall observe only a single movement; the sulphate of soda will enter the vessels and mix with the blood, but the blood will not pass out to mix with the sulphate of soda. Therefore, any theory which is not founded on experiment should be proscribed. It is indispensable that I should make these remarks on physical phenomena as they appear in the organism.

3. There are other phenomena which claim our attention: the ferments which produce the transformation of alimentary substances. This is vital chemistry. Here, also, it is insufficient to apply to the organism the results which have been deduced in the laboratory; we must proceed by experiment. If the phenomena correspond, these functions arise which combine for a common end.

As to the order we shall pursue in the exposition of the functions, it will not differ from that which is usually adopted. We shall follow the classification into functions of *nutrition*, *relation*, and *reproduction*. In each of these groups, the functions have a sort of common physiognomy.

In *nutrition*, we see purely vital phenomena, and phenomena in which chemical actions intervene potently.

In the life of *relation*, physics predominates.

In *reproduction*, chemistry and physics do not intervene. Evidently it is the vital force itself that is acting in an ovum which develops itself, and in which organs are formed.

Thus our path is traced out. We shall proceed by experiment, for it is impossible to understand the functions without experiment. How can we attain to a comprehension of life? Is it by that knowledge of organs and tissues which is furnished by anatomy? It is certain that anatomy suffices, to a certain point, to give some idea of the functions; the arrangement of the digestive apparatus indicates that it propels the liquids which are elaborated in it, but after these general notions anatomy teaches us nothing. Physiology does not discard anatomy, it makes use of it, but it interrogates it in vain with regard to the properties of living beings; anatomy describes form only. What relation is there between the sensibility or the property of secretion and the form of tissues. Experiment has demonstrated the properties of the nerves and muscles, not anatomy.

Thanks to the microscope, anatomy can say now-a-days: that element is a fibre, therefore it contracts, but it was experiment that taught that the fibre contracted. If the micrographer sees a cell, he says, there a secretion takes place. It is not the form of the anatomical element which has taught him this property, it is experience. Are not the supra-renal capsules, the thymus, and the spleen, perfectly described by anatomists? What have their descriptions taught us of the functions of these organs? If we ask an anatomist what is a gland, he answers that it is a vessel and a cell; on the contact of the cell with the vessel separated from it by a wall, the function is established. Very well! glands are everywhere constituted by these two elements; the nature of the secretions changes, the anatomy of glands remains the same. In experiment we seek the aid of chemistry, and learn the properties of matters contained in the cells, the different products which they have elaborated from the blood. One gland produces sugar; another some other substance; their structure is the same; experiment alone decides on their function. By the aid of chemistry we correct the data furnished by anatomy.

The glands in the form of grapes have been compared and classed together. The pancreas, the salivary glands, and the glands of Brunner have been grouped together. We now are acquainted with the diverse secretions of these glands; we know that the products of the salivary glands even are different. The pancreas has a special function; a Brunner's gland is not a minute pancreas. Thus, what anatomy has combined, physiology disunites. Chemistry has taught us these distinctions. There is not, in fine, a single physiological truth that is not the result of experiment.

I know, that at a former epoch, it could be said of physiology, that it was *anatomia animata*. Haller demonstrated, in his lifetime, that physiology could be based on a knowledge of the tissues. He *founded* irritability and sensibility. Such a definition of physiology is no longer possible, for there are many things admitted by physiologists which anatomy does not elucidate in the least. Physiology is—

$$\left.\begin{array}{l}\textit{Anatomia,}\\ \textit{Physica,}\\ \textit{Chymia,}\end{array}\right\}\ \textit{animata.}$$

Haller based physiology exclusively on the solids; he made the irritable and sensible fibre everything. He neglected whatever is unconnected with solidism, the circulating fluids, and the fermenting liquids which are the principal agents of digestion. We cannot, now-a-days, lose sight of these various vital, chemical, and physical agents. Haller, and Bichat after him, were thorough solidists. We must unite solidism to humoralism; we must understand not organs simply, but organs and functions, in order to comprehend how the individual, placed in his proper medium, accomplishes his immediate destiny of living and reproducing.

The individual lives in a medium of which he is the centre, and which he utilizes for the phenomena of his life. In another point of view, if we consider the relation which exists between all created beings, we perceive an harmony, and the individual passes from our view; we distinguish an unity in the complex world of minerals, vegetables, and animals. The minerals seem made for the vegetables, and the vegetables for the animals; there is a continuous exchange going on among the three kingdoms of nature. Thanks to the advances of modern chemistry, we can detect elementary matters in the very fact, so to speak, of traversing this circle. Matter is not created, it does not perish, it circulates. But how can we adopt the opinion that the vegetable developes itself only to serve for the use of the animal, that it was created only for this end. The vegetable was created for an independent object, and has a reason to exist in itself. The starch rises in its stem, and subserves its flowering and fructification. It is transformed into sugar, not for the nutrition of an animal, but for the growth and re.production of the plant.

If we reflect that vegetables nourish animals, and that both vegetables and animals serve for the nourishment of man, then we approach the thought that man himself was made for something else.

In conclusion, all physiology rests on the method of experiment; here lies its future; it cannot abandon this path without ceasing to be a science. We must now lay down the general principles of experiment, as they are modified in their application to living beings. The application of the method, manual dexterity, individual qualities, are nothing; principles are everything; men pass by; the method remains.

CHRONICLE OF MEDICAL SCIENCE.

SURGICAL PATHOLOGY AND OPERATIONS.

1. *Gastrotomy.*

The common remark that the graver operations of surgery succeed much better in the country than in cities, is especially true of the Cæsarian operation. So many fortunate cases of gastrotomy have been reported during the last few years in the provincial journals of France and Germany, that we are inclined to believe that the next authoritative treatise on midwifery which appears, will modify the ethical notions which are now entertained in regard to the duty of the obstetrician in many cases of dystocia, and that in the operative procedures which such cases necessitate, practitioners will feel themselves warranted in bestowing more attention on the claims of the infant than they do at present.

Here is an example, which we condense from the *Journal de Médecine et Chirurgie Pratiques*, of gastrotomy practiced successfully under peculiarly unpropitious conditions:

Madame Soret, æt. 32, robust and well-formed, the mother of two children was taken with labour-pains on the 30th of December, 1852, at the conclusion of a pregnancy during which her health had been excellent. At 9 o'clock at night, six hours from the commencement of labour, the pains became frequent and strong; the feet presented. About 11 o'clock, the patient had a violent pain, which was followed by a torrent of blood. The medical attendant made an examination and could not feel the feet, but recognized the umbilical cord in the situation they had occupied. The physician and friends became alarmed. The physician of the nearest village was summoned. He arrived at 3 o'clock. No pains had occurred in the meantime, the hæmorrhage had continued, and the whole abdomen was exquisitely painful. Nothing was decided on, and the next day passed without any change in the patient's condition, except an increase in her suffering. On the third day (Jan. 1st, 1853) Dr. Mazier, of Saigle, arrived in the afternoon, and detected a long laceration of the uterus, extending on the superior wall of the vagina, and partly obliterated by coagula. No part of the child could be felt. The patient was almost exhausted; the surface was cold; the abdomen would not support the slightest pressure. The danger was urgent. Two courses might be pursued. Either the feet could be sought for and delivery effected through the natural passages, or gastrotomy could be performed. Dr. Mazier decided on the latter alternative. He divided the abdominal walls from the umbilicus to the pubes, found the head of the child and delivered it by placing two fingers in its mouth. The placenta was in the peritonæal cavity and came away readily. The mother's intestines were stained with meconium. The child was dead. The subsequent peritonitis was alarming, and the wound united with difficulty; moreover, there was erysipelas, a confluent miliary eruption, and obstinate constipation. Nevertheless, the patient was out of danger at the end of three weeks, and in forty days she resumed her ordinary avocations. O.

2. *Diagnosis of Secondary Syphilis.*

In making out the diagnosis of constitutional syphilis, surgeons usually limit their examinations, as far as the glandular system is concerned, to the groin and cervical region. We find, however, from an article in the *Presse Médicale Belge*, that the eminent Professor Sigmund, of Vienna, considers an examination of the lymphatic glands situated between the biceps and triceps, just above the internal condyle of the humerus, as an easy and relatively certain means of diagnosis in cases of secondary syphilis. The glands of the neck and groin become engorged and swollen under several pathological conditions. The glands of the arm cannot be felt in a state of health; but, in cases of venereal infection, they become engorged in about six or eight weeks. They gradually acquire the size of a large bean, and then become stationary; they produce no pathological changes in the environing cellular tissue; they are hard, painless and very moveable.

Professor Sigmund declares that it is easy to discriminate the glandular engorgements depending on secondary syphilis from those modifications of the peripheric lymphatic system which are due to scrofula, tubercle, and the exanthemata, if the extremities are examined instead of the cervical region, and buccal and pharyngeal cavities. O.

3. *Method of Operating Upon Noso-pharyngeal Fibrous Polypi.* By M. NELATON, Hopital des Cliniques.

The true points of origin of these polypi are believed, by the author, to be the inferior surface of the basilar process; the inferior surface of the sphenoid bone, and the internal plates of the pterygoid processes. He states that they never arise from the vertebræ, and that when they descend into the pharynx, their course lies between the muscular and mucous coats.

The complete removal of these tumours is an idea of modern origin. Flaubert of Rouen in 1849 removed the whole maxillary bone of one side for this disease. The same operation has been since performed by Michaux, of Louvain, Maisonneuve of Paris, and Huguiers. M. Mane, a surgeon of Avignon, sometime ago proposed the division of the soft palate, but it was not received with approbation.

M. Nelaton, however, adopts the suggestion of M. Mane, but also advises the division of the bony palate also, thus enabling him to reach more completely the disease. His operation is as follows:

The palatine membrane is first divided and the bony arch exposed. Two openings are then made with a perforator through the bony palate, and Liston's forceps being introduced into the perforations a large portion of bone is removed. The posterior part of the nasal fossæ, the inferior surface of the sphenoid bone, and the basilar process will be then exposed, and the polypus brought well into sight.

The removal of the polypus, under these circumstances, is easy. M. Nelaton drags the tumour, and severs its connection with the knife. He has repeatedly been successful, and certainly his method is preferable, inasmuch as the alveolar border and the teeth are preserved.—*Moniteur des Hopitaux.*

4. *Suture of Tendons.* By M. CHASSAIGNAC.

Our readers may recollect a case of successful tenoraphy practiced by Professor Sédillot of Strasbourg, which was reported in a late number of this Journal.* In the *Compte Rendu de la Societé de Chirurgie de Paris,* for April, 1854, we find a second case in which this operation was successfully performed, and which appears to us worthy of being brought to the notice of the profession.

It relates to a girl of sixteen years, who, in Nov. 1853, fell on a piece of broken glass, and received a transverse wound on the anterior aspect of the lower part of the fore-arm, which, after suppurating for a time, cicatrized.

Some months subsequently the patient entered the Hospital St. Antoine with the inability to flex the index finger. It was found that the inferior end of the tendon which had been divided was attached to the cicatrix of the wound already described, and that when this cicatrix was moved, the index finger moved also. On the fourth of February, M. Chassaignac laid bare the flexor tendons, by dissecting a rectangular flap of integument from the fore-arm, and passed a suture through the divided portions of the flexor of the index finger. The flap was then replaced and secured by stitches, and the hand was strongly flexed. In a fortnight the wound had united, and the patient left the hospital with the perfect use of her finger. The ends of the tendon *were not refreshed.* This fact, when considered in connection with Dr. Mayo's case of rupture of the ligament of the patella,† and our observations on tendinous ruptures in the first number of the present volume of this journal, leads to the conclusion that exact apposition is all that is necessary for the re-union of divided tendons, even when separation has existed for a comparatively long period.

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* See Vol. ii, p. 311.

OBSTETRICS, &c.

1. *On the Therapeutics of Puerperal Convulsions.* By P. J. Cabaret.

In a memoir published in a late number of the *Revue Thérapeutique du Midi*, Dr. Cabaret examines the therapeutics of eclamsia supervening during labour. He successively passes in review the various medical remedies which are employed in that terrible complication of child-birth, and lays down their special indications; but the most important part of his essay is that in which the surgical treatment of this affection is considered.

In mild cases, the author coincides with the majority of accoucheurs in the opinion that venesection and revulsives should be relied on, according to the woman's condition. He proscribes ergot and operative interference of any sort.

In graver cases, if the os is dilated, Dr. Cabaret advises that the membranes should be ruptured, and delivery effected either by version or by the forceps. Here, too, his opinion is that of the majority of practitioners.

But in cases of violent convulsions, if the uterine orifice does not present the dilatation requisite for the introduction of the hand or instruments, what is to be done? Here the practice of our author is different from that of many distinguished accoucheurs, who recommend that labour should be terminated by producing forcibly sufficient dilatation.

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† Virginia Med. & Surg. Journal, Vol. i, p. 388.

Dr. Cabaret presents no reasons for rejecting this operation; he simply advocates the propriety of incising the uterine neck. After fortifying himself in this position by citing several highly respectable authorities, such as Guillemot, Martin, and Lauverjat, he adduces the happy results which he has himself obtained from this practice.

He cites two cases, which are very favourable to the method which he recommends.

In the first case, the convulsive paroxysms were excessively violent, and very frequent. There was no dilatation of the os. Four incisions, each two-fifths of an inch in extent (2 *centim.*) were made in the os. The head presented; the forceps were readily applied, and the labour was promptly and happily terminated.

In the second case, the conditions were almost precisely similar; the os was incised crucially; the forceps delivered an active child, and the mother, despite some bad symptoms, made a rapid recovery. O.

2. *Chloroform in Uterine Hæmorrhage.*

Dr. Beatty has brought before the Dublin Medical Society, the following interesting cases, illustrating a new application of this agent.

I was brought five miles from Dublin to attend a lady who had been under my care in three former confinements, while she resided in the city.

On my arrival, I found the head just passing through the vulva. The labour having been short and easy, the child was soon expelled, and before the placenta came away, a very profuse hæmorrhage took place. A drachm of ergot of rye was now administered; pressure, &c., of course, was attended to, and the placenta, being found in the vagina, was removed.

The hæmorrhage continued with great rapidity, notwithstanding very good contraction of the uterus. Vinegar and water freely applied seemed unavailing. The ground was covered with snow at the time. I ordered a bucketful to be brought up to the room, and making up balls, I passed them into the vagina, and heaped the hips and abdomen with the snow. By these means, the hæmorrhage was at last arrested, but the patient, a very small, slender woman, was reduced to a very low ebb, indeed. The pulse was nearly imperceptible; the breathing distressed and gasping, and the formidable complaint of noises in the ears was urgently made. Fifty drops of laudanum in brandy were given, and in a quarter of an hour, the symptoms growing worse, seventy drops more and large quantities of the brandy were taken. Great exhaustion, great nervous excitement, great desire for sleep, harassed the patient. Repose was indispensable to her safety; opium did not procure it; time was of consequence. It occurred to me that if I could tranquilize the nervous system for even a short time, the opium she had taken would come into play and continue the narcotic influence so essential to her life.

I fortunately had my chloroform with me, and as she lay tossing from side to side and calling for air, I applied the chloroform to her nose. She soon became more calm, by degrees the jactitation ceased; she assumed a more composed attitude; and to my great delight, sleep, quiet and natural, soon came over her. Hot jars were placed to her legs and feet, and finding the sleep so natural, I held the instrument with the chloroform at a distance from her mouth, so as to keep up the action in a faint degree.

It was most interesting, and as may be well imagined, very exciting to watch the state of the pulse during this time. I was too far off to get any assistance. I had tried an experiment with a powerful agent, but my firm belief was that the new medicine would save her life. With the finger on the pulse while she slept, I waited for the returning wave, sometimes imagining the impulse was greater, again finding it feeble as before. But it did increase in strength, and before she had slept half an hour, there was a manifest improvement in the beat. The feet were kept warm and the sleep was kept up for two hours, at the end of which time she awoke most miraculously refreshed. In fact, I never saw any patient so thoroughly recovered, at the end of twenty-four hours, as this lady was at the end of two. She rapidly returned to perfect health.

Encouraged by the marked benefit derived from the administration of chloroform in this hitherto forbidden kind of case, I was led to employ it, under similar circumstances, on the 8th of the present month, (March.)

A lady was delivered of her third child after a natural, easy labour, and as soon as the placenta came away, a great rush of hæmorrhage followed, which continued with great violence for an hour.

Ergot and the usual means succeeded in arresting the flow of blood, but she was left in a very exhausted condition. Absence of pulse, prostration, sighing, jactitation, &c., were prominent.

Laudanum, in doses of fifty drops, repeated in ten minutes, and brandy, freely given, failed to procure rest. Indeed, the opium seemed rather to prevent sleep. I now placed a piece of sponge in the bottom of a conical shaped wineglass, and having moistened it with chloroform, I held the glass over the mouth and nose of the patient. The medicine did not fail to produce its usual soothing effect. Soon the nervous excitement passed away, by degrees the eyelids closed, and healthy, natural sleep was induced. This was maintained for two hours, during which the warmth of the body returned, the pulse returned at the wrist, and slowly regained strength, and at the end of the time, when she awoke, she said she felt perfectly well and happy. She described the first effects of the chloroform as being most delightful. The peace of mind and soothing of the whole nervous system produced by it, she declared resembled a foretaste of heaven.—*Dublin Quarterly Journal*, May, 1854.

3. *Treatment of Lacerations of the Fourchette.* By M. VELPEAU.

Lacerations of the fourchette is an exceedingly common accident in primiparous women, and one which usually requires but little attention. Sometimes, however, these wounds ulcerate, and are covered with a buffy secretion holding a middle place between diptheritis and hospital gangrene. Under such circumstances, the consequences of neglect may be very serious. According to M. Velpeau, (*Jour. de Conn. Méd. Chir.*) these accidents may always be prevented by observing strict cleanliness, by using baths and lotions, consisting at first of simple warm water, and subsequently with water sweetened with honey. If the wound does not cicatrize speedily, Velpeau uses mercurial topical applications, the cicatrizing action of which is well known. The wound is washed three or four times daily with marsh-mallows water, holding in suspension a drachm of calomel for every four ounces of vehicle, or else a light coating is applied of an ointment composed of a drachm of white precipitate in an ounce of lard. If the buffy secretion has commenced, these agents will be powerless; it will then be necessary to act as in cases of hospital gangrene, that is to say, to cover the ulcerated surface with lemon juice, and, if this is ineffectual, to cauterize it with nitrate of silver, chlorohydric acid, and acid nitrate of mercury, successively.

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4. *Incision of the Cervix Uteri in Difficult Labour.* By PAUL DUBOIS.

We have, during the present year, twice* reported cases of rigidity of the uterine neck in labours, successfully treated by incision. The propriety of the operation has been fully recognized by the highest continental authorities, and as evidence of the fact, we give the two following reports of cases occurring in the practice of M. P. Dubois, Dean of the Faculty of Medicine of Paris, at the Hôpital de la Faculté. They are reported in the *Journ. de Méd. et de Chir.*, for March, 1854.

CASE I.—A woman at the full term of pregnancy was taken in labour on the 13th of February. On the 14th, dilatation of the os was complete. She was not delivered on the 15th, when M. Dubois examined and found the cervix stretched, and an annular stricture impeding the spontaneous termination of the labour. With a probe-pointed bistoury, two incisions were made in the opposite sides of this ring, and in a very short time, the child was expelled.

CASE II.—This woman had a deformed pelvis and the delay was produced by the transverse position of the head of the fœtus at the superior strait. M. Dubois, in order to save the life of the child, made free incisions right and left; was thus enabled to apply the forceps and deliver at once.

EPIDEMIOLOGY.

1. *Report on the Recent Progress of Cholera.* By JOHN CHATTO, Esq.

The rise and progress of an epidemic of Asiatic cholera may be chronicled with all the accuracy which appertains to a history of an invading army. Like the invasion of the Huns or Tartars, of which the historian tells, this dread enemy springs forth from its home in the Indian jungles, and marches forward with irresistible force, never pausing in its triumphant progress, until all the nations and countries of the world are laid prostrate at its feet.

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* See Va. Med. & Surg. Journal, No. x, p. 264, No. xv. p. 196.

Unable as we are to resist its approaches, and almost powerless in controlling its awful devastations, we can only, like the historian who chronicled the sack and destruction of ancient Rome, relate the circumstances of its progress, and the suffering and death which accompanied its appearance.

The report of Mr. Chatto is such a history, and we give, in an abridged form, his account of the epidemic which is now around us, from its first appearance in 1851, to its arrival on the shores of Great Britain; the author promising in a second paper, to give a review of the manifestations of the disease in the united kingdom during the same period.

This epidemic appeared first in Basorah in the year 1851, according to the report of Mr. Ernest Cloquet, at that time a resident of Teheran, to the French Academy of Medicine. It followed the course of the Tigris, arrived in Bagdad early in 1852, and traversing Kurdistan spread itself over Azenbijan.

In Tauris the capital of this province, 1000 persons died daily. The disease reached Teheran early in 1853, and it is calculated, that in a population of 150,000 souls, more than 15,000 perished.

In the mean time, the disease, without any of the usual premonitions and with a suddenness unprecedented, made its appearance in Poland. It was first seen in the district of Leeradz in the government of Warsaw, on May 24th, 1852, and thence spread in every direction. It did this, however, in the most irregular manner, concentrating itself in particular localities, and then leaping to distant points, leaving for the time the intermediate places unscathed.

In Warsaw, up to September 5th, 1852, the number of cases amounted to 10,673, of which 4,462 died. In the government of Warsaw, there were 45,328 cases, of which 20,906 died. Nothing proved the advantages of the strictest hygienic rules more than the remarkable exemption of the Russian forces during this fatal epidemic in Poland. Notwithstanding the large armies stationed in the province, they furnished only 2,066 cases.

Kalisch, a town on the Prussian frontier, became, in June, 1852, a fearful focus of disease. The fugitives from this place transporting it to the Prussian towns, Ostruvo, and Pleschen. Other fugitives carried it to Breslau which had just suffered, recovered from a cholera epidemic which prevailed from August, 1851, to January, 1852. The epidemic on that occasion, seemed to have travelled from Bohemia, according to the statement in the Prussian *Medicinische Zeitung*, where, during the year 1851, there were 58,121 cases, and 23,225 deaths.

The cholera soon invaded the whole of Prussia, arriving in Dantzig on the 20th of August; later still in Berlin, Landsberg, and the other principal towns of that kingdom. The Marianwerden government furnished 9,294 cases, and 5,640 deaths. Whilst in the government of Posen, there occurred 19,612 cases, with 11,292 deaths.

Dr. Lœwendhart (*Medic. Zeitung*) gives some interesting details with regard to the cholera in Prenzlaw. This remarkable fact was noticed, *that Jews seemed to have enjoyed a marked exemption from the disease.*

The Dr. does not attempt to account in any way for this extraordinary fact.

The epidemic appeared in St. Petersburg, October 1st, 1852, and before its close, there were 13,054 cases and 5,333 deaths. It arrived in Moscow by August, 1853. Many other parts of the north of Europe suffered during this time. It raged during the heat of July in Copenhagen, with great fury. The presence of the disease was officially recognised in Stockholm on the 26th August; 4,797 cases occurring, and 2,839 deaths reported.

Hamburg on the 28th of July, and Rotterdam on the 23d of August, fell under the ban of the pestilence. The maximum in the latter cities being 66 cases per diem. M. Vrolik, 20th November, 1853, declares that the cholera had become epidemic in Amsterdam. Although there were 20,000 Jews alone in that city in a state of absolute misery, yet owing to the active means resorted to for furnishing preventive treatment, the disease continued stationary, at 7 cases a day. 3000 cases of *preliminary* diarrhœa were promptly checked by this effective organization.

In Paris, the cholera had been preceded by an epidemic of typhoid fever, which was very fatal. There are no accurate reports of the number of cases of cholera, but it was more manageable than it has heretofore been. Arriving in November, 1853, it ceased in January, 1854, with only 969 reported deaths. It has, however, shewn itself again this summer, and the number of deaths to June 29th, 1854, were about 400. Although now in the very centre of medical learning, the proportion of recoveries was no greater than in the wilds of Russia or Turkey. Thus, of 296 cases treated in the hospital, 186 died; a proportion even larger than we have given in other places.

The accounts from Spain are unsatisfactory. The disease has invaded Galicia—600 cases, and 200 deaths. In April, at Pontevedra, and on May 6th, at Corunna. It had not yet reached Madrid at the last accounts.

This sketch of the recent progress of cholera in Europe, which we have briefly condensed for the benefit of our readers, will be followed by a history of the disease, as it shewed itself in Great Britain, which we will probably notice.—*Condensed from Association Medical Journal.*

2. *On the Use of Vegetable and Mineral Acids in the Treatment Prophylactic and Remedial of Epidemic Disorders of the Bowels.* By J. H. Tucker, Esq.

Mr. Tucker read his essay before the Epidemiological Society of London, the President, Dr. Babington, in the chair. We will give an abstract of the more interesting points.

The author alluded to the remarkable exemption from Asiatic Cholera of the cider districts of Herefordshire, Somersetshire and part of

Devonshire, during the Epidemic of 1849, whilst the surrounding country was ravaged by the pestilence. Upon further enquiry, it appeared that those who drank cider as a common beverage, were especially exempt. It has also been remarked, that in some parts of France and in Normandy, more particularly, where cider is much used, cholera but rarely exists.

These facts are brought forward to shew the prophylactic power of cider in this disease, and the author argues from analogy to shew that the other acids, such as lemon-juice, grapes, gooseberries and even vinegar, would be found equally efficacious.

Mr. Tucker proceeded to present a great number of cases and many authorities to prove that the acids, both vegetable and mineral, were powerful remedial agents in cholera, and especially in the premonitory diarrhœa. He advocated, during the prevalence of the epidemic, the free employment of pure vinegar, but pointed out the necessity of caution in the use of the unwholesome substitute for that article in the London shops.

The chairman, Dr. Babington, called attention to the well-known fact that many gentlemen living in India and suffering from enlarged livers and chronic dysenteries had been suddenly relieved by eating grapes, on their arrival at the Cape of Good Hope.

A discussion arose in the Society, during which many interesting statistics were presented by the advocates of the "acid treatment," and very striking instances given of its utility as a prophylactic and remedial agent.

Dr. Snow did not agree with Mr. Tucker in his conclusions. He considered cider useful in diarrhœa, not, however, from its acid qualities, but because of the astringent matter it contained.

Dr. Jeannent believed in the beneficial effects of some acids in dysentery, but thought they ought not to be considered as a class of remedies, differing as they did in their qualities and action. He had lately cured a patient of cholera, with sulphuric acid, who afterwards killed himself by taking sup. tartrate of potash.—*Condensed from Medical Times & Gazette.*

3. *Oil of Turpentine by the Iatraleptic Method in Asiatic Cholera.*

By Dr. Elie Bellencontre.

The author sent to the *Gazette des Hôpitaux* last January the particulars of a very severe case of cholera, treated and cured by frictions of the essence of turpentine upon the vertebral column. The following case has occurred since the publication of the last report:—

Madame Berthau, aged 49, of nervous temperament, who had not menstruated for a year, accompanied to the Hospital St. Antoine, on the 28th of April, about mid-day, one of the domestics, who was attacked by cholera. Upon her return from the Hospital about five in the evening, she was seized with watery evacuations, which persisted through the whole night; they were so numerous that neither the patient nor those who assisted could reckon the number. About 5 A. M., cramps in both upper and lower extremities, and also vomiting, supervened. Then there was suppression of the urine, and coldness of the entire body. About 9, A. M., the family sent for Dr. A. Thierry; but, as he was absent, Dr. Bellencontre arrived in his place, and he found the patient in the following state:—Face hypocratic and blue; no radial pulse; suppression of the urine; abundant and copious evacuations, which passed involuntarily; frequent vomiting; cramps so intense that they roused the patient from her torpor, and made her cry out; the skin, having lost its elasticity, retained the folds into which it was thrown after the cramps had subsided. The body looked like that of a skeleton.

For half an hour the oil of turpentine was rubbed, first along the vertebral column, and then over the whole body. Twenty drops were administered, with warm water, internally. Then the husband was directed to continue the frictions every quarter of an hour, or hour, until the surface of the body became red and in a glow. Towards evening, there was a marked improvement; the warmth of surface had returned; the pulse had acquired both frequency and power. The skin assumed a red, coppery colour; the face had recovered animation. She confessed that she had no consciousness of what had passed. The evacuations were considerably diminished, both in amount and frequency.

The frictions were continued, and a solution of gum arabic was given in abundance as a drink, with the object of distending the alimentary canal, that the natural secretions might the more readily be restored.

The case terminated favourably, and the author concludes by remarking that he could enumerate others of a similar nature, two of which especially he mentions, in justification of the anti-choleraic value of this therapeutic agent.—*Med. Times & Gaz.*

4. *Analysis of Black Vomit in Yellow Fever.*

1. When black vomit is filtered, the colouring matter remains upon the filter, and the filtered fluid is colourless.

2. The specific gravity of the filtered fluid varies from 102. to 103.

3. The filtered fluid always reddens litmus.

4. Nitrate of silver when added to the filtered fluid form a large quantity of a white precipitate, which is insoluble in nitric acid, but soluble in ammonia; hence the fluid contains hydro-chloric acid.

5. Lime water, kali nitricum, and the other alkalies, form no other precipitate with the fluid, either when submitted to cold or heat.

6. A solution of the bi-chloride hydrarg. produces no apparent reaction with this filtered fluid.

7. Muriate and nitrate of baryta each produces a slight turbulence when added to the filtered fluid.

8. Acetate of lead added to the filtered fluid causes a white flocky precipitate, which is insoluble in water, but soluble in acetic acid; hence mucous exists in the fluid.

9. A precipitate is formed by nitrate of silver in solution being added to the filtered fluid. If kali purum be added to this mixture it deprives it of all acid; and then, afterwards, if sulphuric acid be added to this, a slight effervescence will ensue; hence, we infer the existence of carbonic acid gas in the fluid.

Colouring Matter of Black Vomit.

1. It presents the appearance to the naked eye of blood globules which have been separated by chemical means from the blood.
2. When dried by artificial heat or the atmosphere, it resembles hematosine procured from man's blood.

Microscopic Analysis.

A homogeneous fluid that contains—1. Blood globules entire. 2. Fragments of globules. 3. Mucus. 4. Epithelial cells. 5. Amorphus matter. 6. Granules sometimes. 7. Fat globules. 8. Torulæ and spores.—*New Orleans News & Hospital Gazette*, Sept. 1854.

4. *Yellow Fever.*

This fatal scourge of some of our southern cities, has been for some time past shewing itself with more than usual malignity in Savannah, Georgia.

We notice that Dr. P. H. Wildman announces through the newspapers that he has used with great success, the "muriated tinct. of iron," in more than one hundred and fifty cases, and of that number not one has died who commenced the remedy prior to the appearance of "black vomit."

Dr. S. N. Harris, also of Savannah, testifies to the efficacy of the above treatment.

Dr. Wildman administers the tincture, in doses varying from twenty to sixty drops, every two hours. He considers it acts as a styptic to the coats of the stomach, and also medicates the blood. Dr. Harris states that it will produce salivation with more certainty than calomel, and by preserving the integrity of the blood enables it to resist the depressing influences of the disease.

N. B. Hardly had we finished preparing the above abstract for our pages when the Savannah Republican reported the death, by yellow fever, of Dr. P. H. Wildman.

In announcing the death of Dr. Wildman, the Republican says:

"This is a most sad event, for the deceased fell a noble sacrifice to his efforts to relieve the sick. He went night and day, in sunshine and storm, sleeping oftener in his carriage than in his bed, and paying sometimes as many as eighty and one hundred visits during a single night. Several times he felt the invasion of the yellow fever upon his system, but as he informed us, he succeeded in checking its progress by taking muriated tincture of iron, the remedy which he has applied with much success to others.

"Great, however, as his physical powers of endurance were, he overtasked them, and the specific which brought relief to so many others who now survive to mourn him, failed when applied to himself."

P. S. On Sept. 16th, of yellow fever, Dr. S. N. Harris, of Savannah Geo.

TOXICOLOGY &c.

1. *Poisoning by the Introduction of Visiting Cards in the Mouth.*

In the month of August, 1853, Dr. Caffe was summoned to the Hotel des Princes, by M. Riek, a Mexican merchant, of German extraction, to see his infant, who was suffering from the usual symptoms attending poisoning by a salt of copper. Dr. Caffe found the child holding in its hands and at the mouth some green-coloured cards, which the nurse would not take away for fear of making it cross. Vomiting was easily induced; and, in the matter thrown up was found the cause of the symptoms. The infant rapidly recovered; indeed, after the third day, was so far improved, that the family was enabled to continue their journey. The case is reported in the *Journal des Connaissances Medicales.* Another, in all essentials similar, has appeared in *El Heraldo Medico.*

A third case occurred under the care of Dr. Eichmann. Two children, one four years of age, the other six, always enjoying good health, were taken ill in the month of August. Their symptoms raised the suspicion that they were suffering from chronic affection of the abdomen. Neither Dr. Eichmann nor the other medical men called in to see the children could discover the nature of the malady. For some weeks, the symptoms increased step by step, till the end of September, when the little invalids appeared in the following state. The most extreme prostration of strength; the face very pale; anorexia; vomiting; a disturbed state of the digestive organs; pain in the stomach; contraction of the abdominal walls; trembling of upper limbs, etc. It was at this critical time that Dr. Eichmann perceived that the children, in playing with visiting cards polished with a preparation of lead, had unfortunately introduced some pieces of the cards into their mouths. By means of the usual treatment in cases of lead colic, Dr. Eichmann succeeded in rapidly dispersing the bad symptoms; but it was a long time ere the children recovered their usual strength.—*Gaz. des Hôpitaux,* June, 1854.

2. *The German Poison-Eaters.*

Dr. Tschudi has published, in the *Wiener Medizinische Wochenschrift*, two letters, the translation of which is to be found in the *Journal de Médicine de Bruxelles*, containing some curious details relative to a class of people who are habitual arsenic-eaters.

In some countries of lower Austria and of Styria, especially in the mountains which separate these parts from Hungary, there exists among the peasantry the singular habit of eating arsenic. They purchase it under the name of hedri (*hedri, hedrich, hatterrauch*) from wandering herbalists, or pedlars, who, on their part, obtain it from workers in Hungarian glass, from veterinary surgeons, from charlatans.

These poison-eaters (*toxicophagi*) have a double aim; first, they wish to give themselves, by this dangerous habit, a fresh and healthy appearance, and a certain degree of embonpoint. Many of the peasant-girls, and even the men, have recourse to this expedient from coquetry and a desire to please; and it is remarkable what success they attain, for the young toxicophagi are distinguished by the freshness of the complexion and by the aspect of flourishing health. The following is one of many instances. A girl who attended cows, in good health, but pale and thin, was employed at a farm in the parish of H——. Having a lover, whom she wished to attract yet more by her personal charms, she had recourse to the usual method, and took arsenic several times a week. The desired result was soon obtained; and, after some months, she became fat, chubby-cheeked, and, in short, quite to Celadon's taste. To carry the effect further, she increased the dose, and fell a victim to her "coquetterie;" she died poisoned. The number of deaths from the abuse of arsenic is by no means inconsiderable, especially among the young people. Every ecclesiastic in those parts can speak of several victims, and Dr. Tschudi states that his researches among the clergy were very interesting. He learned, that so careful were the victims of this practice to conceal what they had done, that the secret often was revealed only on the death-bed.

The second advantage gained by the toxicophagi is, that they become more "volatile," more free in respiration, and able to ascend high mountains with ease. Upon every long excursion into the mountains they take a little bit of arsenic, which they let dissolve in the mouth. The effect is surprising. They ascend without difficulty heights which would have been almost insurmountable without this practice. The author adds, that, upon this experience, he has advantageously administered Fowler's solution in cases of asthma.

The toxicophagi commence with a bit of arsenic the size of a lentil-seed, or about half a grain. They keep to this dose, which they swallow several times a week, morning and evening, for a long period, to become accustomed to it. Then they increase the quantity insensibly, but with precaution, until the desired effect is produced. A countryman, named R——, of the commune Ag——, a sexagenarian, and in excellent health, was in the habit of daily taking four grains. He had followed the habit forty years, and had transmitted it to his son.

There was no trace of arsenical cachexia in this individual, no symptoms of chronic poisoning. It is to be remarked, however, that, when the practice is dropped, emaciation generally ensues from some cause, either from the withdrawal of the stimulus, or from accidental or acquired disease. The custom does not diminish the sexual passion, as is the case with the opiophagi of the East, or with those who use the betel in India and Polynesia. On the contrary, the feeling becomes more strong.

It may be as well to bring to mind a general use of arsenic in Vienna, among the stablemen and coachmen of the great houses. They mix a good pinch of the powder with corn, put a piece the size of a pea in a linen bag, and attach it to the bit of the horse. The saliva dissolves the poison. This produces a bright aspect of the skin, roundness and elegance of form, and foam at the mouth. The coachmen of the hills adopt the same practice before commencing a laborious journey; and horse-dealers carry with them small balls of arsenic, to be given to those animals which they are leading to the market. Should a horse thus treated pass into the hands of a master who does not employ arsenic, he gets thin, loses his freshness, becomes dull, and, in spite of abundant food, does not acquire his former sleekness.—*Gaz. des Hopitaux*, May 16, 1854.

3. *On Poisoning with the Chloride of Zinc.* By THOMAS STRATTON, M. D., Royal Navy.

The use of the solution of chloride of zinc (Sir W. Burnett's disinfecting fluid) in hospitals and on shipboard, is so common as to make it important that the surest antidote to this poison should be fully recognised.

We therefore append an abridgment of Dr. Stratton's paper in the Edinburgh Medical and Surgical Journal, July, 1854, giving a *resumé* of eight cases of poisoning from this metallic salt, and the simple remedy he proposes to administer in order to neutralise its noxious agency:

Dr. Stratford states that when on service in the emigrant fever hospitals in Canada, he used Burnett's disinfecting solution in large quantities. He discovered whilst washing his hands wet with the solution, that the soap was decomposed, and he thought, at once, that carbonate of soda or potash, or soapsuds, would be useful as an antidote to the chloride of zinc. He soon had an opportunity of making the experiment.

On May 4th, 1848, James Curran, aged 54 and previously healthy, swallowed a dense solution of chloride of zinc, mistaking it for whiskey. He said that he thought he had taken about a wineglassful, and if so, he was estimated to have swallowed 400 grains of chloride of zinc. As neither carbonate of soda or potash were at hand, Dr. Stratton used soap and water in large quantities. He made a rapid and perfect recovery.

The usual remedy suggested by the books is milk freely administered, or albumen in some form, as, for instance, the white of egg. Doctor Stratton's reports shew that the carbonates are more successful in their results, and in the form of soap and water, always easily obtained.

4. *Case of Attempted Poisoning by Copper.* By M. A. CHEVALIER, *Annales d'Hygéne et de Médecine Légale.* January, 1854.

This case is especially worthy of notice, as it gives us an example of the amount of labour and scientific research employed in the investigation and complete development of this secret crime. When we notice the accuracy and careful analysis displayed during the progress of the trial, we can hardly avoid coming to the conclusion, that many of those unfortunates pronounced by an incompetent coroner and a still more ignorant jury, to have "died by a visitation of God," may probably have fallen victims to the diabolical crime of secret poisoning.

Pierre Brunet had been married five years to Madeleine Bruges, but had evidently become tired of her for sometime previous to this occurrence. On the 26th of March, contrary to his usual custom, he visited her and remained all night. In the morning his wife went out and left him alone. On her return, he had departed, and she proceeded to eat her dinner, which consisted of some haricot beans, which had been placed in the cupboard the day before. She remarked that the beans had a curious colour, being much darker than they were. She heated them, however, but only tasted them twice, when she felt a painful sensation in the throat, and although she did not again attempt to eat them, she suffered with sore-throat for some days. She immediately suspected that her husband intended to poison her, and on his return, in three or four days, she proposed to him to eat the beans, which he said he was willing to do the next morning for breakfast. However, his wife emptied the contents of the dish into the garden.

The authorities, however, soon got notice of what had passed, and officers were sent, who collected the beans (which had been buried,) and the earth which surrounded them, as well as a napkin, on which were stains, which appeared to have been caused by the beans.

On prosecuting the enquiry, it was found that a young man had seen in Brunet's possession a small box full of greenish-blue powder. The witness also stated that a little of the powder had dropped on the stone floor and stained it. He showed the mark to the magistrates, who had the stone in question lifted. All the different articles were put in the hands of M. Chevalier and of M. Lassaigne, for chemical examination.

They first carefully examined some of the earth in which the beans had been buried. A few pieces of beans and some entire ones were found in it. It was observed that the interior of the haricots was stained of a pale green colour; there were also a few greenish particles mixed with the mass of earth; and on their being picked out and touched with a solution of ferrocyanide of potassium, they became of a violet red colour, indicating, therefore, that these were particles of salt of copper. About six ounces of the earth were now mixed with eight ounces of distilled water, and placed in a clean porcelain capsule; rather more than two ounces of pure sulphuric acid was then added. Considerable effervescence was produced, due to the presence in the earth of carbonates and organic matter. The black residue was moistened with nitric acid, and heated so as to get rid of the excess of acid; it was then treated with boiling distilled water. The resulting fluid being filtered was of a rather dark-brown colour; it was divided into several portions, and treated as follows:—1. A portion was placed in a Marsh's apparatus, but no stains were produced, thus proving the absence of arsenic and antimony. This experiment was performed because two green pigments (Scheele's green and Scheveinfurt green) partake of the properties both of copper and arsenic. 2. A stream of sulphuretted hydrogen was passed through another portion of the liquid. A brown precipitate was produced. 3. A small piece of bright iron being put into a little of the same liquid, in a quarter of an hour was covered with a red coating of metallic copper. 4. The rest of the liquid was evaporated to dryness. The residue was placed in contact with an aqueous solution of ammonia; the mixture assumed the characteristic blue colour, indicative of the presence of copper. All these experiments proved that the earth contained neither arsenic nor antimony, but a small quantity of a salt of copper.

The beans themselves were next analysed. For this purpose they were placed in a new porcelain crucible, which was submitted to heat until the beans were carbonised. The ashes were then put in a tube, and treated with ammonia. After some hours the ammonia had assumed the blue colour, indicative of the presence of a salt of copper.

The stains on the stone floor were then examined, and their colour proved to depend on a salt of copper; these stains were almost insoluble in water, thus showing that the salt was not the sulphate. The napkin was found to have several greenish spots upon it; these were touched with a solution of ferrocyanide of potassium, when they immediately became of a reddish colour, from the formation of a cyanide of copper.

It now became a question whether the earth in question might not contain copper as a normal ingredient, as it is well known that various soils do. Three portions of the earth from different parts of Brunet's garden were accordingly sent for analysis, when it was found that in one no copper could be detected, while in the two others very minute traces were recognised. The amount of copper present was, however, so small, that it could not be confounded with the more considerable quantity of the metal found in the earth among which the beans had been buried.

In order to prove that the copper contained in the beans had not been derived from this source, some beans were mixt up with portions of earth from Brunet's garden, moistened with distilled water, and exposed to the air for four days. At the end of this time they were carefully examined, but not a trace of copper could be detected.

The accused, who for a long time maintained his innocence, being at last overcome by the proofs which were brought against him, confessed that he had mixt something with the beans, with the view of poisoning his wife, but that the substance he had employed was the powder scraped off from the ends of a number of lucifer-matches. Some of the powder obtained in this way was analysed by MM. Chevalier and Lassaigne, who proved that the blue colour depended on the presence of Prussian blue, and that it did not contain a trace of copper.

The result of these analyses was, that a salt of copper had been mixed with the beans, and that the salt was, in all probability, verdigris (subacetate of copper.)

Brunet was found guilty by the jury, and sentenced to the galleys for life.

PSYCHOLOGICAL AND FORENSIC MEDICINE.

1. *Medical Jurisprudence of Insanity.*

The common law (which is ours, except so far as we have modified it by the statutes) has adopted two widely different rules on the subject of insanity; one having relation to civil affairs, and the other referring entirely to criminal cases. By the first, a man whose mind is deranged, his intellects having become insufficient to conduct the common business of life, his property will be taken from him, and trustees appointed to take care of and manage his estate. By the second, strange as it may seem, the same man, who has been adjudged incapable of conducting his own concerns on account of insanity, may be held responsible for criminal acts, provided he possesses a mind capable of distinguishing right from wrong. In legal effect there are, therefore, two kinds of unsoundness of mind—an unsoundness which is partial, and destroys one's capacity for civil affairs, and an unsoundness which is total, and utterly destroys the moral responsibility, so that the deranged is no longer a reasonable and accountable being. In contemplation of law, partial insanity simply reduces a man to the condition of a child, a minor under age, who cannot be compelled to fulfil his contracts, but who is still answerable for crimes committed. His position is similar to that of the habitual drunkard—he is deprived of the management of his property, because manifestly disqualified by his habits to take care of it judiciously; and similar, also, to that of the man whose mind falls into decay by reason of advanced age, and the apparent failure of the mental power.

According to the early writers it was necessary for a man to be entirely incapable of distinguishing between right and wrong, to excuse him from the consequences of any act. If he be but partially insane, the law does not excuse him. Lord Hale expresses it, if he possess as great understanding as a child of fourteen years hath, he may be guilty of treason or felony. In the case of Edward Arnold, tried at the Surrey Assizes for shooting at Lord Onslow, the court charged the jury thus: "It is not every kind of frantic humour or something unaccountable in a man's actions, that points him out to be such a madman as to be exempt from punishment; it must be a man that is totally deprived of his understanding and memory, and dost not know what he is doing, no more than an infant, or a brute, or a wild beast." So also in the case of Earl Ferrers, tried and convicted of the murder of John Johnson in 1760, the solicitor general thus laid down the law. "If there be a total, permanent want of reason, it will acquit the prisoner. If there be a total temporary want of it when the offence was committed, it will acquit the prisoner; but if there be only a partial degree of insanity, mixed with a partial degree of reason; not a full and complete use of reason, but a competent use of it, sufficient to have restrained those passions which produced the crime; if there be thought and design; a faculty to distinguish the nature of actions, to discern the difference between moral good and evil; then, upon the fact of the offence proved, the judgment of the law must take place."

It has been sometimes said that the law does not understand, or knows no distinction between different kinds of insanity. This is not strictly true, as is proved by the case of John Bellingham, tried for the murder of the Right Honourable Spencer Percival, before Chief Justice Mansfield, in 1812. The rule, as laid down in that case, exempts the prisoner from responsibility, provided he is found deprived of all power of reasoning, so as not to be able to distinguish whether it was right or wrong to commit the most wicked transaction. But this, he adds, must be proved; and the jury must find it as a fact, beyond all doubt, that at the time he committed the act with which he stood charged, he did not consider murder was a crime against the laws of God and nature. There was no other proof of insanity which would excuse murder or any other crime.

After speaking of other kinds of insanity, the judge then goes on to say:—"There was a third species of insanity, in which the patient fancied the existence of injury, and sought an opportunity of gratifying revenge by some hostile act. If such a person were capable, in other respects, of distinguishing right from wrong, there was no excuse for any act of atrocity, which he might commit under this description of derangement."

Having referred to a few of the leading cases on the subject of insanity and shewn what the law now is and how far it enforces human responsibility, we arrive at a point when we have a right and are bound to speak for ourselves. These ancient laws derived from our mother country have been the very foundation of our liberty. Our ancestors instead of coming forth a loose, disjointed and confused congregation of reckless men, like the Spanish in Mexico or Peru, impatient of control and thirsting for gold, came forth freely and soberly, a well appointed community. In place of an arbitrary government of undefined civil and military powers, they brought with them charters of liberty, civil officers, an organized government and a society firmly knit together, wearing as a common garment the common law of England.

Like our political institutions, these laws come down to us from the past, associated with the events and scenes of history: imperfect in particulars, but in the main breathing the earnest and manly spirit of times when men stood upon their rights, maintained the claims of the citizen against the sovereign, and established the law upon the rough and rugged field of battle. They come to us dressed in the style of an early day, but with a universal and catholic authority, comprehending the past, present, and future. They command respect and elicit our regard in infancy and childhood, long before we are able to understand or appreciate their excellence. It is thus the common law becomes a part of the common mind, intimately blending itself with the thoughts, and entering into the judgments of each individual: so that it is not, perhaps, too much to say, that on general subjects the common opinion of the law is the highest and best evidence of what that law is.

Let us now, however, observe what are the legal and moral responsibilities of the insane under the action of this law. And here, if we mistake not, had no rule ever been adopted, and the question were now for the first time presented, whether the law should make any distinction in its treatment of the insane, between what is termed partial and total insanity, there would, we apprehend, be but one opinion. The impossibility of drawing the line between them would alone be sufficient to demonstrate its impolicy, if not injustice. Besides, on a matter of so much moment and practical importance, a rule that is to be enforced ought to be clearly drawn, so that the distinction need not be left to the jury to make, according as their prejudices or the circumstances of the case may incline. The language of the law should be clear and definite, such as may not be misunderstood by judge or jury. As the rule now stands, the administration of it is exceeding difficult; it is plain enough *theoretically*, but practically, infinitely difficult to be applied. The witness shows the conduct of the prisoner to be insane; the judge declares that if he be so insane as not to know what is right, he cannot be convicted of crime. Here the jury take the case with almost legislative powers, and set themselves to inquire about the prisoner's capacity to distinguish between good and evil, an inquiry, where insanity is shewn, involving difficulties to the jury and dangers to the citizen, to which neither should be subjected under wise and just laws.

Now, under the old principle as laid down by the early writers, it is quite possible that the law be rigidly enforced while the most monstrous injustice is perpetrated; and this fact alone demonstrates the propriety of such an amendment as will for ever render it impossible to commit so grievous a wrong in the sacred name of justice. Under the present decisions of our courts, they are understood to hold that an individual may be insane in respect to money affairs, and still capable of committing the crime of murder or arson, and so of all monomaniacs. On the immediate subject of their delusion, they are not considered moral agents; on all others they are held to a strict accountability. The man we saw at the asylum at Utica, who considered himself the great financial agent of the state, controlling the operations of Wall Street, and the slightest transactions in the market, coining gold and silver, and sending them forth as a convenient currency for the accommodation of the community—that man, under the legal rule, would not, perhaps, be deemed capable of theft or robbery. The particular nature of his delusion would render it impossible. Not so in reference to other subjects. True, it is thought by some that such an unsoundness destroys the idea of moral responsibility. The law, however, is more rigid and stoical; it holds there may be insanity and a moral sense still remaining in the mind with a responsible judgment, and makes the circumstance of each particular case determine whether the moral sense be entirely destroyed, or only affected by the moral unsoundness. If the individual labour under a single delusion that will not yield to evidence, and remain otherwise sane, the philosophy of the law, as at present expounded, assumes that, upon questions in which the delusive ideas are not necessarily involved, they will have no influence upon the mind; so that if there remain the bare knowledge of right and wrong, the person is capable of committing crime, no matter how strange and absurd may be the action of his passions.

The man Mr. Erskine mentioned in the Hadfield trial, who believed himself the Christ, evidently could distinguish right from wrong. His standing a severe cross-examination so long, baffling the utmost skill of counsel, as well as his complaints against the committee of his estate, showed his sense of justice, and that he appreciated, to some extent, his own rights and relations to others. But for all that, who would think of holding him capable of crime? He really believes himself the Saviour of mankind, and as such, empowered to forgive sins. Shall such a man be punished for the dreamy speculations and uncertain action of a shattered intellect? It would be a monstrous doctrine to maintain, and still more monstrous to enforce. And yet, under the rule, the jury must either make the law what the justice of the case requires, and thereby liberally construe the oath they take, to render a verdict according to the evidence, into a general obligation to do what is right in the particular case; or, they must find the unfortunate man guilty of a crime at which nature shudders.

The true rule, it should seem, would hold, that if a man be insane, the law ought to regard him as an infant, incapable of crime. It should not be a question whether he knows right from wrong, but whether he be sane or not; for if he be a monomaniac, he should not be punished, even though a jury be able to say, upon their oath, that he knew the act he performed was wrong. The association of ideas in the mind of the insane is too subtle for our comprehension, and the mystery of his motive too profound for our investigation. We assume to punish guilt, because we understand what constitutes crime in the case of a sane man; possessing, as we do, his thoughts and feelings, with enough of his motives to enable us to pronounce upon his conduct. But in respect to the insane, who knows the operations of his mind, or what dark power reigns over him? Who can enter into his spirit, or explore the labyrinth of his inconceivable thoughts? Who can become so like him as to take upon himself *the very feelings of insanity*, and understand him as we understand each other? We are none of us able to do so. Would it not then be modest in us to waive a principle of law implying such knowledge?—*Abridged from Am. Review*, Vol. viii.

THERAPEUTICAL RECORD.

Cancer of the Uterus.—The employment of arsenical injections to prevent the fœtor of uterine cancer, is especially recommended by Mr. Lloyd of St. Bartholomews. He states that such treatment is much to be preferred to the ordinary disinfectants which are but of temporary benefit. The extraordinary influence of arsenical applications in cleaning cancerous ulcers, is well known. Some real good may result from their use, in addition to the prevention of fœtor, since the diminution of discharge and sloughing will save the patient's powers, and possibly retard the cancerous growth.

Mr. Lloyd uses an injection of from two to eight grains of the white arsenic to the pint of water.

Cholera.—The *Gazette des Hôpitaux* lately published a remarkable cure of cholera by mistake. Dr. Roger (de l'Ore) having been called upon to visit a patient in the worst stage of cholera, prescribed, but with scarcely the slightest hope that it would be efficacious, an emetic of one and a half gramme of ipecacuanha, to be taken in three doses (*prises*) at intervals of half an hour. The person who was charged to administer the ipecacuanha, seeing the word *prises*, and finding that the medicine was a powder, imagined it was a kind of snuff, and that the three prises meant three pinches. He consequently made the patient sniff up a third. The ipecacuanha thus administered, instead of making the patient vomit, caused him to sneeze with such force, and for so long a time, that a violent re-action took place. Heat returned to the surface, all the symptoms of cholera ceased, and when the physician paid his next visit he found the patient cured.—*Boston Med. & Surg. Jour.*

Constipation.—Dr. Graves of Dublin was very fond of using the following prescription in habitual constipation. ℞. *Elect. sennæ*, ℥ij.; *bitart. potass.*, ℥ss.; *carb. ferri.*, ʒij.; *syr. zingib.* q. s. Ft. Electuarius.

Diabetes.—Dr. William Bird Herapath reports the use of yeast in one case of diabetes with complete success. It was in January 1853.

Before treatment, the urine of the patient had a specific gravity of 1044, and contained 170 grammes of sugar to a pint. Dr. Herapath gave the yeast in doses of two and three spoonfuls a day, taken in milk. At the end of two days, the specific gravity of the urine was reduced to 1020, and contained only 60 grammes of sugar in the pint. In six weeks the sugar disappeared entirely, the urine having assumed its normal character, and the patient was restored to his usual embonpoint and strength. The author explains the cure in the following manner. In ordinary circumstances the glucose is converted, under the influence of the yeast, into alcohol and carbonic acid. But if reaction takes place in the contact of the albuminous and protein compounds, as in the stomach, the product is then lactic acid, acetic acid, and perhaps also alcohol and carbonic acid.—*Revue Therapeutique.*

Dropsy.—M. Grand, pharmacien, publishes in the *Répertorie de pharmacie,* for June, 1854, the following formula for diuretic wine: sliced bulbs of squill, eight parts; powdered digitalis, eight parts; cannella, twelve parts; acetate of potassa, fifteen parts; Madeira wine, five hundred parts. Macerate for eight days and strain. The dose is half an ounce, which may be increased to a wineglassful twice daily.

Dropsy After Scarlatina.—Prof. Manshuer, of Vienna, (*Journal für Kinderkrankheiten*) has made some experiments with the nitrate of urea as a diuretic in the dropsy supervening on scarlet fever. He administers this medicine in ⅓ grain doses, every two hours, in combination with a little sugar. M. Manshuer reports two cases cured with this remedy.

Epilepsy.—M. Bogetti (*Rev. Ther. du Midi.*) gives five cases of epilepsy cured by the use of the second bark of the black elder, (*jambucus niger.* In order to prepare it for administration, the branches of the elder, of one or two years growth, should be selected; the grey bark being removed, the second bark should be scraped and made into an infusion. ℞. *Cort. jamb. niger,* ℥ij.: *aquæ cal.,* ℥v.

This infusion should be taken in half ounce doses, repeatedly, whilst a paroxysm is threatening; the patient fasting. The remedy should be used cautiously, as it is well known to be an emetico-cathartic and hydrogogue of considerable power.

Herpes.—Dr. Quintanilla announces in the *Boletin de Medicina,* that he has succeeded in curing a large number of obstinate herpetic eruptions, by the following ointment. ℞. Of powdered cinabar, 4 parts; sublimed sulphur, 2 parts; laudanum, 2 parts; fresh butter, 32 parts; with a few drops of essence of mint. The diseased surface should be carefully cleansed with warm soap-water thrice daily, and then covered with ointment.

Hooping-Cough.—Dr. Arnoldi, of Montreal, some years ago, proposed the use of nitric acid in full and repeated doses, to children with hooping-cough.

In a late work on this disease, by Dr. Gibb, of England, the remedy is again brought to the notice of the profession. He considers that nitric acid has the power of cutting short the disease, and indeed, " that it not only arrests the paroxysms and removes the hoop, but that it shortens the disease almost as effectually as quinine does intermittent fever.

The method of administering the acid, adopted by Doctor Arnoldi and followed by Dr. Gibb, is the following. To a tumblerful of very sweet water, add as much acid as will bring the water to the strength of pure lemon juice. An adult may consume this quantity in twenty-four hours. A child one year old may take a dessert spoonful every hour. A solution of carb. soda, two drachms to eight ounces of water, to be used as a gargle, directly after taking the acid.

Scabies.—Dr. Brunen (*New Orleans News & Hospital Gazette*) gives an abstract of the treatment instituted by Dr. Helmentag of Cologne, for the cure of itch. The method has been extensively tested in the German Hospitals; especially in the City Hospital at Bremen, where Dr. Bogel, assistant surgeon of that institution, reports, in the Medical Gazette, of Hanover, 400 cases successfully treated.

The treatment consists of first rubbing well the whole body with one or two ounces of soft-soap, and then placing the patient in a bath of 90°, F., where he is to remain an hour. The little chamber in which dwells the *acarus scabiei*, being thus completely opened, and the skin made clean and soft, the cure is at once concluded by the use of frictions over the whole body, made with a solution of caustic potash, containing from ʒj to ℥ss of the active agent. The nurse should wear gloves during the operation, and make use of a ball of cotton saturated in the solution of caustic. After using the frictions for half an hour, a bath, moderately warm is advised, next a cold bath, and the cure is completed in the short space of three hours.

Uterine Hæmorrhage—Dr. Brock, of Wellington, England, lately departed this life, giving the following legacy to the profession. As our readers have an " undivided interest" in this donation, we call their attention to the following extract from the will:

" Ample experience having taught me the very great value of capsicum in uterine hæmorrhage, in doses of from five to ten grains, every ten minutes until the hæmorrhage ceases, I consider it my imperative duty to record my testimony to the effects of this remedy, which is not appreciated by the profession in proportion to its worth; and I hereby request my executors to publish this recommendation of it in the leading medical journals."

BIBLIOGRAPHICAL RECORD.

I. *Clinical Lectures on Consumption.* By THEOPHILUS THOMPSON, M. D., of London. Philadelphia: Lindsay & Blakiston. 1854. (From A. Morris.)

The lectures which constitute the basis of this volume, appeared in the London Lancet, in 1851. They had previously been delivered at the Brompton Hospital for Consumption, where, as physician to that large institution, devoted exclusively to this disease, their author enjoyed unusually great advantages for studying the affection.

Of this opportunity he has made good use. The Lectures attracted considerable attention at the time of their publication. Their style was pleasing.

Dr. Thompson's method of arranging his treatise, imparted a freshness to its details from its novelty and comprehensiveness. Besides this they were not wanting in original observations of sufficient importance to create for them more than ordinary celebrity. They appear now improved and modified according to the later observations of their author, in a handsome volume of 250 pages.

In calling attention to a new work on consumption, although we have so lately referred to the subject in our journal, we do not feel that we are trespassing upon our readers. We know that there is scarcely one of them who is not at this time watching the slow, the progressive, the mournful decay of some victim, more or less brilliant in mind, more or less gifted in person, only awaiting the time which he is powerless to avert, when death shall end the struggle. Such a reflection gives to us the deepest interest in the whole subject, and we naturally turn to all who signify their design to speak to us about it. Dr. Thompson, as has been said, comes forward with the fullest opportunities for such a careful study of the disease as entitle him to great attention, and if we are not mistaken, he has produced a volume replete with much practical interest. Without at all neglecting the details of physical diagnosis, he has paid great attention to the general symptoms of consumption—more than is usually done by modern authors.

In doing so, we think he has embodied much information which will be particularly useful to the general practitioner. Our patients are interested (as being the most cognizable symptoms to them) about their cough, its variations from time to time, their expectoration and its different aspects, the state of the pulse, and other general symptoms.

About these things, our author has treated fully, and in the most interesting manner. He has shown their importance, not only in diagnosis, but what is perhaps of more consequence, their great value in many instances as guides to treatment. His observations upon all these different points will, in our opinion, fully repay the most attentive perusal.

As the earliest sign of the disease to be detected by auscultation, he ranks prolonged expiration, and he has brought forward some valuable statistics on this point.

In 2000 cases it proved to be the most remarkable symptom in 288, excluding cases with bronchial complications. "Hæmoptysis had occurred in 91 of these cases, that is in 31 per cent., a portion calculated to confirm my opinion of the significancy of the prolonged murmurs, and at the same time sufficiently below the average frequency of hæmoptysis in the first stage of phthisis, to support the assumption that the prolonged expiratory murmur takes precedence of other characteristic signs, which are commonly assumed as requisite, in order to prove the existence of consumptive disease."

His experience is in accordance with the established belief that this symptom, if slight, is more reliable when occurring on the left side, where when persistent and not attended by "symptoms of bronchitis, emphysema, or pneumonia, it indicates some permanent obstacle tò the free exit of air, and, in a majority of instances, this obstruction is of a tuberculous nature."

He has found this symptom, although occasionally modified by treatment, commonly to progress, becoming more and more marked until replaced by more characteristic local signs, as dullness on percussion, bronchophony, &c. &c.

Hæmoptysis. About this symptom so alarming to the patient, and sometimes so perplexing to the practitioner, our author remarks that when it "occurs unconnected with disease of the heart, or mechanical injuries, or suppressed catamenia, it is, perhaps, the most significant of any single symptom of phthisis."

The popular opinion that the "breaking a blood vessel" often produces consumption, or that hæmoptysis precedes the disease, is refuted by a well-arranged table of 24 cases.

"In 14 of the 24, other symptoms, such as loss of flesh or strength, or changes of respiratory sound preceded the hæmoptysis. In 6 cases, one or the other of these symptoms, and the spitting of blood, were believed to commence together. In only 4 are we without evidence of the pre-existence of disturbed function. Even in these four, it is highly probable that a careful examination, prior to the occurrence of the symptom in question, would have detected some change of respiration."

"The ordinary cause of hæmoptysis," continues he, "is doubtless compression or obliteration of the pulmonary veins by the tubercular deposit; in consequence of which blood, interrupted in its natural channels, overflows or exudes into the neighbouring bronchi. If this explanation be correct, hæmoptysis, moderate in amount, must be regarded rather as beneficial than alarming. By preventing the stagnation of unhealthy blood, it must tend to oppose the extension of tuberculous disease; and as far as a conclusion may be drawn from the cases under my care, the influence of hæmoptysis of considerable amount, would seem to have been rather favourable than otherwise. You will observe that some of the cases of phthisis recorded in the table, accompanied with copious hæmoptysis, were remarkably slow in their progress.

"In six of the cases, the quantity of blood expectorated at once has exceeded a pint, and the time which has elapsed since the occurrence of the profuse hæmoptysis to the present period has been, in these patients, respectively 6 months, 22 months, 12 months, 10 months, 8 months, and 5 years. . . . These facts are in harmony with my general experience, as showing that the symptom tends more to retard than to accelerate a fatal issue."

The author concludes, therefore, "that undue haste to arrest the hæmoptysis should be avoided, considering it better to moderate it by producing determination to other organs, than to employ direct astringents."

Dr. Thompson seems inclined to place considerable reliance on a new sign of phthisis, to which he has paid great attention, the results of which he has given in his Lectures. This is a red margin around the gums. We have the blue margin in lead poisoning. The state of the blood in consumption, in like manner, he believes, gives rise to "a mark at the reflected edge of the gums, usually deeper in colour than the adjoining surface, and producing a festooned appearance by the accuracy with which it corresponds with the curve of the gingival border."

This symptom he found less frequently absent in man than in women or children. Out of 26 men, only six were free from it, and while the former exhibited unequivocal signs of phthisis, in the latter some doubt existed as to its existence. Dr. Thompson believes this to be one of the earliest signs of phthisis.

With regard to treatment, our author's great remedy is the cod liver oil, using in his hospital 600 gallons per annum.

We have so recently referred to this subject, that any further notice of it here would be unnecessary. We cannot, however, refrain from directing the reader's attention to his observations on the use of this article, and particularly to its endermic application. "Three years since," says he, "I was requested to see a gentleman from the country, confined to his bed, emaciated, hectic, and, apparently, failing rapidly, with a cavity at the apex of the right lung. There was considerable diarrhœa, and thinking the internal use of cod liver oil unseasonable, I ordered an ounce combined with oil of lavender, to be rubbed into the chest, night and morning. This gentleman gradually rallied and returned to the country, where he advanced much in strength and weight, and rode about on horseback. I examined him last year, and judging from the physical signs, found the size of the cavity materially reduced."

Where the oil agrees, he insists upon its continuance, alternated with courses of steel, for several years.

The concluding Lectures are devoted to a consideration of the causes of consumption. We have only room for one extract, which we think possessed of considerable interest. It "refers to the influence of depressing mental emotions as predisposing to phthisis." "The terms, 'breathless anxiety, breathless suspense,' are not mere metaphors. The language of inspiration, while pre-eminently adapted for communicating truths as clearly to the untutored multitude as to philosophers, on occasions consistent with this, its universal object, often combines with general comprehensiveness, a high degree of scientific accuracy. . . . . I refer to that remarkable expression, occurring in a lament of the afflicted Job: 'He will not suffer me to take my breath, but filleth me with bitterness.'"

After showing how mental depression retards respiration, he continues: "Any unnatural retardation of the respiratory act must, I conceive, be calculated to produce pulmonary congestion, and to take most effect on those portions of the lungs which in the ordinary condition are most actively engaged."

The author cites the great mortality among prisoners confined for capital offences, as furnishing proof of this influence of mental depression as its predisposing cause.

With these extracts, taken quite at random from its pages, we conclude our notice of Dr. Thompson's Lectures on Consumption. We have read them with pleasure, and we believe that our readers will be profited by their perusal. P.

II. *Manual of Human Microscopical Anatomy.* By A. KOLLIKER, Professor of Anatomy and Physiology in Würtzburg. Translated by GEORGE BUSK, F. R. S., and THOMAS HUXLEY, F. R. S. Edited, with Notes and Additions, J. DACOSTA, M. D. Philadelphia: Lippincott, Grambo & Co. 1854. (From JAMES WOODHOUSE.)

If we were asked to point out the proudest monument of human assiduity and human patience, we would be much disposed to select the science of anatomy, and however startling such a proposition may appear, a hasty sketch of the present condition of the science, will bear us out in our statement.

The human body, the last and greatest work of omnipotence and omniscience, the most complicated yet perfect of all machines, with functions and powers of the most varied and opposite characters, and above all, controlled and governed by an intangible essence, an irrecognizable agent, the divine afflatus itself—this is our study. What progress have we made? how far have we developed and explained its wonderful variety of configuration and function; how deeply have we pried into its mysteries, or unravelled its minute and hidden labyrynths?

Anatomical investigations, and dissections of the human body began with the rise of medicine itself, and history does not reach back far enough to give us these dates. Year after year, and century after century rolled on, and the workers in the field of medical science, of which anatomy was ever regarded as the very foundation, dissected and labored, macerated and dried, tasted and smelt, studied and compared, each and every portion of this elaborate machine, until, as far as the human eye could reach, or the scalpel's point could penetrate, they were masters of the subject. So thoroughly has every portion of the human body been conned over by these indefatigable explorers, that it has been years since anything of great importance has been added to the records of anatomy, and the man who displays a new fascia or demonstrates a fibre of muscle not before known, is chronicled as a discoverer.

Vast as this work was, complete and thorough as it has been executed, the tale is but half told. The human body which could yield no longer anything to the dissecting knife, is transferred to the laboratory, and a new field is laid open.

This chemico-anatomical school beginning early with their investigations into the structure and constituents of the body, yet did but comparatively little, until of late years, when the increasing knowledge of the laws of chemical science and the facilities afforded by new methods of analysis, have enabled them to reduce every portion of the bodily structure to its primitive elements. The brain, the lungs, the blood, the chyle, the secretions and excretions, the bones and teeth, all have been decomposed and accurately analyzed, until, instead of the human form divine, there remains nothing but C, O, H, and N.

The student, but half exhausted with his noble subject, here pauses and surveys the scene of his victories. Every bone, muscle, vein and artery is named and carefully described. Each organ duly examined and commented on; the brain dissected and minutely delineated in every direction, the constituents of the secretions and excretions are found out. Everything is complete. Like Alexander, he sighs for a new world to conquer.

A drop of blood, perchance, comes under the focus of the but newly-invented magnifying glass, and Malpighi and Leuenhœk turn over another leaf in the book of nature. The invisible wonders of the anatomical system are now all exposed. The elementary structure of every constituent is now to be studied. The *microscope* offers to the student a new conquest, a new field, boundless in extent and filled with wonders and mysteries; and to this last and grandest task, we have now to address ourselves. So far-reaching is the subject, that although it has been two hundred years since this method of investigation was first proposed by Malpighi, it was only during the present century that it could be considered as a science, and now still remains open to the anatomist and microscopist, with many a secret unveiled, and many a mystery yet to be explained.

In the last fifty years, however, great advances have been made in the study of histology. Bichat, in 1801, laid down the laws of the science in his "*Anatomie Générale*," since which time the miscroscope has been patiently and perseveringly used, and in the last thirty years, observation has followed upon observation. In 1838, the discovery, by Schwann, of the *original identical cellular composition of all animal organisms, and of the origin of the higher structures from the cellular element*, afforded a clue to guide us in all of our further investigations, and it thus stands invitingly open.

The American school of medicine has made but small progress heretofore in this new branch of science. It has been necessarily so occupied with the practical duties and stern realities of the profession, as to have almost entirely neglected this study. It is an apathy which will soon, however, pass away; the entertainment is too fascinating to be longer resisted, and in a few years there will be amongst us spirits as ardent in their pursuit of microscopical anatomy as Schwann and Kolliker.

To further us in the prosecution of this study, the medical publishers are beginning to present to our notice, translations of the most important works on microscopical anatomy, and Messrs. Lippincott, Grambo & Co., of Philadelphia, have but lately issued from their press the most complete and perfect work on this subject which has ever yet been compiled; the production of probably the most successful of living microscopists—Kolliker of Würtzbürg. It now lies before us, as captivating in its exterior as the neatest typography and the finest paper can render it; profusely ornamented and illustrated by engravings, and filled to overflowing with the truths of nature as developed by the magnifying glass.

Professor Kolliker has, in his book, which, though of 800 pages, is but an abridgement of his larger work, presented to us a condensed view of the elementary parts of the human organism. He has also, by adding a full account of the method to be employed in their investigations, and an accurate list of all the sources from which further information can be derived, rendered his book a complete guide to all who may desire to prosecute the study.

This Manual (so called by its author) begins the subject by a complete investigation of the elementary granules, fundamental substance, and cell tissue; the composition and formation of cells, their multiplication and metamorphoses.

It then passes on to the discussion of the higher elementary parts: the tissues, organs and systems. Thence we are inducted into the most rigorous and accurate examination of the special anatomy of the body, each minutest portion being presented to us for microscopical examination. The whole forms a perfect text-book of the subject; it fills a vacuum in our medical literature, and must be, in truth, an indispensable element in every medical student's library. M.

EDITORIAL AND MISCELLANEOUS.

THE PRESENT STATE OF THE PROFESSION.

It is much the fashion, now-a-days, to decry the medical men of the present time, and awful lamentations are often heard in certain quarters over the degeneracy of the profession. Comparisons are drawn between this generation and the one which preceded it, and sad prophecies are uttered as to the inevitable tendency under the present arrangement of things, to a complete loss on the part of the profession, of that high and dignified position in the eyes of the community, which it once held.

There is surely no better way of arriving at this result than the continual repetition of these jeremiads at every meeting of the profession, whether the National Association, the state societies, or the local organizations. The public hear of this charge coming from such high quarters, until, very naturally, they think it true. If all the sea-captains in the union were to meet in solemn conclave, and declare that they knew nothing of navigation, very few persons would be disposed to trust their lives in their hands, and thus our so-called medical reformers, who are the principal agents in sending abroad this impression, ought not to be surprised if the public, so often warned against the inefficiency of the present generation of medical men, should appeal to quackery for that aid which they have been taught to believe cannot be obtained in a more legitimate way.

It is full time that this matter should be noticed, and its evil tendencies checked. The young medical men must no longer sit still and permit this degrading imputation to be cast upon them. We deny the charge, and make the statement unhesitatingly, that the public is, at this time, better served with medical aid, and the profession, as a class, is better able to give them all the advantages of the science, than it ever has been.

The cause of this woful deficiency is generally attributed to the defective condition of medical education; the number of medical schools, and the facility with which everybody is admitted into the profession.

It has been shrewdly suspected that some of these reformers who preach crusades against the medical schools, are like the hungry ass, who, in the midst of the dust and confusion of the public road, puts his head over the enclosure, and seeing the grassy pastures and comfortable stalls of a popular college, betrays, with a borborygmic rumble, the emptiness of his stomach. Quoth he, "There are no greater asses than I am," and his sonorous bray of defiance rings through the land. In other words, it is a contest between the outs and the ins. Those who are out are very radical; they want reform. They who are in, are well satisfied with things as they are, and the science is neither advanced or retarded by this struggle for place.

We grant that medical education in this country is defective. We would like to think it possible, in the present condition of things, to improve it, and yet we believe it will work its own cure. It is true that the profession is rapidly increasing in numbers; the tide is swelling every year, and the ranks are filled to overflowing. Where there used to be one physician, there are now ten. Ten brains are at work in the prosecution of the practice of medicine, and they, too, fired with the fierce competition around them, straining every nerve to command success. Does the public lose anything by this? So great is the press, that the young aspirant is *obliged* to struggle with all his might to succeed in his profession. The public have an opportunity of selecting from amongst many; they learn to discriminate; and though oftentimes the intriguer and trickster gains an ephemeral reputation, the stern common sense of the people, eventually and surely brings him to exposure.

So far from losing position and degenerating into ignorance and apathy, the medical mind of this country was never so active as at the present moment. The contest is tremendous, and the competition increasing daily. Go through this state, and contrast the country practitioner with his predecessor. See the number of ambitious young men who are there devoting themselves to their profession heart and soul, for without this devotion, they will be left behind in the race, and say no more that we are not as good as our fathers; it is not so.

Again, we ask attention to the medical literature of the present day. The medical press is teeming with new books, our table literally groans with the publications, original and translated, which are issued by our large publishing houses. Do they print books unless they know that they will find purchasers? Ask Professor Dunglison or Dr. Meigs if their books are not read, or enquire of Blanchard & Lea if medical books don't pay? The periodical literature of the science is another evidence of the great activity of the medical mind. More than forty medical journals are issued in the United States, and largely supported by this much abused profession. In the far west, where the echo of the Indian warwhoop has hardly ceased, we can find a medical paper, with translations from the French and German authors, and oftentimes sensible and original contributions from these degenerate sons of Hippocrates. The steamers are crowded with them, spending the first fruits of their hard labors on a visit to Paris, so that they may be better worthy of public confidence, and make up for those deficiencies in their early education, which they now are aware of.

It is time for these things to be talked of frankly and acted on boldly, by the young school of medicine. The false impressions which are thrown abroad, tincturing the public mind, must be met, and confuted. Their personal reputations demand it; the dignity and honour of the profession claim it at their hands.

MEDICAL SOCIETY OF VIRGINIA.

The semi-annual meeting of the Medical Society of Virginia is advertised to take place in the city of Petersburg, on Tuesday the 3rd of October next.

We hope that the profession will take interest enough in the Society to attend its meeting in some force. Otherwise, the inevitable tendency of things will be to reduce it to the level of a mere clique, with no power to do either good or harm; and the hopes of its founders, who desired it to be the means of promoting "the advancement of medical knowledge throughout Virginia," would never be fulfilled. To prevent this result, we have always advocated the removal of the Society from place to place, and thus interest different sections of the state in its behalf. Hence it is that we would be glad to see the constitution so altered as to have the elections held in the various cities of the commonwealth, so as to put the control of the Society for a period of one year in the hands of a different portion of the profession. As it now is, the elective meetings being always in Richmond, it binds the Society forever in the hands of the profession of that city, instead of being controlled by the whole of the Virginia medical body.

Virginia Med & Surg. Journal.

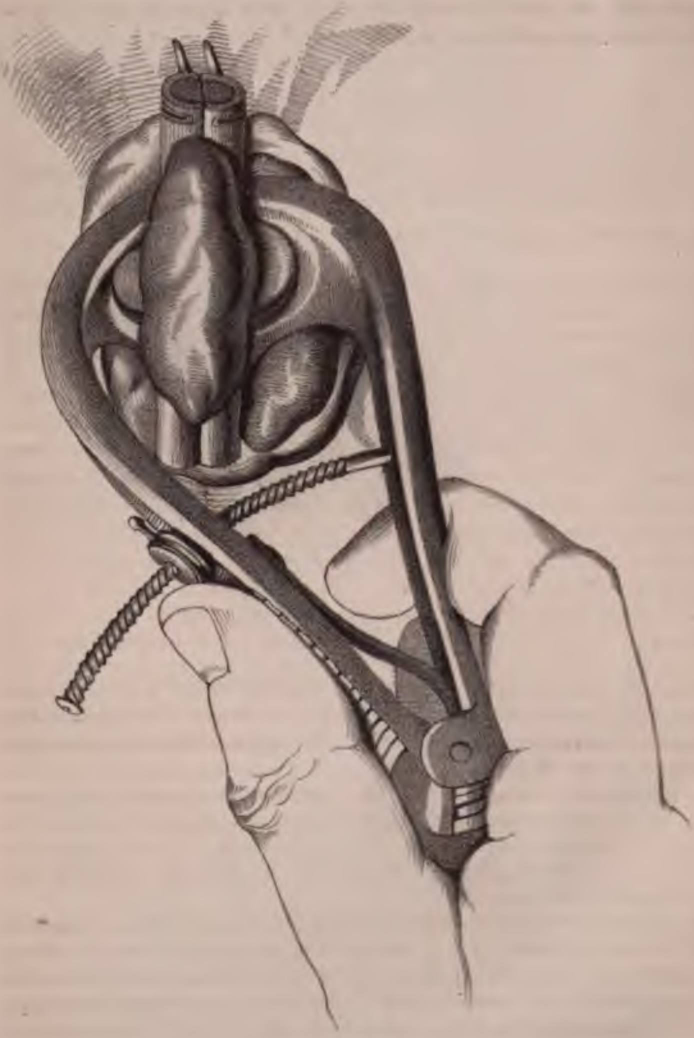

Fig. 1.

T. Sinclair's lith Phil

Whatever may be the amount of scientific entertainment which the members are to expect, of one thing they may be certain, that they will receive from our medical brethren of Petersburg, a cordial, a hearty welcome. There will be no danger that the well won fame of our neighbours will be lost on this occasion, and nothing would give them more pleasure than to have their hospitalities tested to the utmost.

*On Circular Cauterization of the Base of Internal Hemorrhoidal Tumours Complicated with Prolapse of the Mucous Membrane of the Rectum.** By DR. ALPHONSE AMUSSAT, Jun.

The number of works which, both in ancient and modern times, has been published on the subject of hemorrhoids, the place which this affection occupies in pathological treatises, and the various remedies proposed against it, testify at once to its frequency and its importance. The question, so long debated, of the expediency of surgical interference in affections of this nature, has not yet been decided in the minds of all practitioners, and I have no intention of entering here on a discussion which would lead me beyond the limits I have laid down for myself. A survey of our periodical literature will at once show the efforts which the most distinguished physicians and surgeons of all countries have made, especially since the commencement of the nineteenth century, to facilitate and render more certain the cure of this disease, whether, in its simple form, it constitutes principally an annoyance and an inconvenience, or complicated with ulceration, severe hemorrhage, or prolapse of the neighbouring rectal mucous membrane, it threatens life, or slowly exhausts the patient's strength. The therapeutics of this affection are consequently more than ordinarily rich in medicines, and varied operative proceedings.

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* This monograph translated for the Dublin Quarterly Review from the *Bulletin Therapeutique*, is well worthy of the space assigned it, because of the ingenious and novel method of applying caustics to hemorrhoidal tumours without endangering the integrity of the surrounding tissues.

The best and safest operation for the radical cure of these tumours is still not settled. The most common method of cure, the ligature, has its opponents, who attribute to its use phlebitis, especially; and at a recent discussion before the Medical Society of London, February 1854, *Mr. Henry Smith* reported a case of tetanus from the application of the ligature.

The employment of the nitric acid in the treatment of hemorrhoids, first suggested by *Mr. Houston* of Dublin, has been received with approbation by the profession. *Mr. Quain*, in his work on the rectum, speaks of its use with some favor. The great danger, however, in the caustic treatment is the risk of involving the surrounding parts in its application. Mr. Ashton relates three instances in which a communication has been formed between the rectum and vagina by the use of nitric acid in too large quantities. The instrument employed by Dr. Amussat, of which we give a diagram, prevents effectually the occurrence of this accident; and deprives the caustic method of its greatest objection. [*Ed. Va. Med. and Surg. Jour.*

For my part, whenever hemorrhoids are of long standing, voluminous, ulcerated, accompanied by prolapse of the mucous membrane of the rectum, or with copious hemorrhages; when they affect the general health; and when the more ordinary therapeutic means have failed, and no special contra-indication exists, I remove one or more according to their number and volume.

During twenty-five years that my father has pursued this plan, the destruction of the hemorrhoids, combined with the precautions he has recommended to the observance of his patients, has never given him other than satisfactory results, both as respects the local condition of the parts, and the state of the general health.

Prolapse of the mucous membrane of the rectum, being one of the most frequent complications of confirmed and long-standing internal hemorrhoids, has appeared to me worthy of fixing our attention, both as to its etiology and its treatment. Admitted by most authors, this prolapse is easily explained when we carefully study the course of the principal affection. In the beginning, hemorrhoids appear as the effects of hereditary predisposition, of constipation, a sedentary life, the abuse of stimulants, or of a too nutritious diet, and are at first formed only by a determination of blood to the vessels of the inferior extremity of the rectum; little tumours, invisible externally, are soon developed, and become the seat of itching and of tension, which increase under the influence of the producing causes, often disappear to return again, and are, in a great number of cases, accompanied by more or less abundant hemorrhages.

The affection in this simple state belongs to internal pathology, and a return to suitable hygienic rules, or the adoption of a very simple antiphlogistic treatment is, most frequently, sufficient to overcome it. But when, continuing to be developed, the hemorrhoidal tumours have acquired a certain volume, they begin to appear at the anal orifice, which they more or less obstruct; and however little the patient may be constipated, as is most usually the case, the hardened fæcal matters push down the tumours before them during the action of the bowels. The consequence is, that the mucous membrane of the rectum, necessarily following their movements, becomes as much lengthened as possible; but soon this extension ceases to be sufficient; united to the muscular membrane by a loose cellular tissue, it is gradually separated from it, and subsequently returns with progressively increasing difficulty, being retained externally by the hemorrhoidal masses, and the sphincter compressing them. If the patient, induced by deceptive inclinations to go to stool, by pain or any other cause, acquires a habit of making prolonged efforts at defecation, the hemorrhoids increase, and the prolapse of the mucous membrane augments to that point, that it soon becomes impossible to return it after each motion without the employment of a regular taxis. By degrees, the sphincter becoming relaxed, the hemorrhoids come down on the least movement; at last a period arrives when they remain constantly out, unless they are retained by a bandage specially adapted to the purpose, the presence of which—always inconvenient—finally becomes insupportable. These facts I have verified in a sufficiently great number of patients, and I shall hereafter quote cases which will establish them.

In some very rare instances a protrusion of the rectum and internal hemorrhoids coexist; we have, then, two distinct affections to treat. During ten years that I have attended my father's practice, I have only once had an opportunity of observing this coincidence,* while I have often seen long-standing voluminous hemorrhoidal tumours accompanied by a more or less extensive prolapse of the rectal mucous membrane.

Since the month of April, 1844,† the date of the first employment of the cauterization of the base of hemorrhoidal tumours with grooved forceps charged with Filhos' caustic,‡ the idea of which originated with me, we had perceived that this new mode of operation enabled us to obtain the cure of hemorrhoids, and that the hemorrhages, ulcerations, &c., disappeared with the tumours; but it remained to be shown whether, in cases in which these affections should be complicated with tolerably extensive prolapse of the rectal mucous membrane, cauterization by the same plan would remedy the principal affection and its complication. Experience has not been tardy in justifying the hope we had entertained in this respect. It is, moreover, easy to account for this result, which we verified in all our operations of this kind, in reading the description of our proceeding. The cases of the patients in whom this complication was sufficiently advanced, and the drawings taken from nature, which I have appended to them, will, I trust, enable practitioners to understand it.

When we are about to examine a patient whom we suppose to be affected with internal hemorrhoids, we cause him to place himself on a vessel, and to make efforts at defecation; the tumours then come down, and we easily demonstrate their presence; often they even permanently appear externally, or show themselves on the exercise of the least effort. But as it is necessary to judge precisely of the extent of the prolapse of the mucous membrane of the rectum, we advise the patient to take a lavement, and to pass it again in our presence some moments after, using efforts, and continuing the latter when he gets up. With the assistance of this mode of investigation, we arrive at an exact appreciation of the extent of the affection, and the operator is enabled to judge beforehand at wi height he ought to place the *porte-caustique* forceps, in order to cure at once t hemorrhoidal affection, and the rectal prolapse which complicates it.

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* Mémoire sur la destruction des Hémorrhoïdes Internes, par la Cauterisation circulaire de leur Pédicule. Par J. Z. Amussat. 1836. Page 23.

† Ibid. p. 32.

‡ Filhos' caustic is the *potassa c calce* of the U. S. Pharmacopeia carefully prepared and moulded into sticks. The *Journ. de Pharm.* gives this description of its preparation.

The potassa is fused in an iron spoon, and one third of its weight of lime is added in-divided portions; the whole being stirred with an iron rod. The fused mass is then run into lead tubes, closed at one end, about three inches long and from a quarter to half an inch in diameter. The sticks are kept in the lead tubes with the open end downwards, in glass tubes containing quick lime and closed with a cork. When required for use, as much of the lead is scraped off as may be necessary to uncover the caustic. [*Ed. Va. Med. and Surg. Journal.*

The introduction of the index finger into the rectum is a means of diagno- on which we must not place too much reliance, for I have known several patien who, examined in this manner by the most distinguished practitioners, had bee declared not to have hemorrhoids, and in whom I, nevertheless, found even voluminous ones. The surgeon accustomed to this mode of examination, indeed. experiences internally a peculiar sensation of softness in certain points, proves the existence of inequalities rather than of tumours disappearing under the finger, and gives pain to the patient when the tumours are ulcerated; but in general these signs are not sufficient to enable him to affirm whether a hemorrhoidal affection exists or not. The rectal *toucher* is especially useful in ascertaining whether any particular complication, such as a stricture, polypus, or cancer, coexists.

At the same time we examine the number of tumours which ought to be cauterized, as, for the following reasons, we never destroy them all:—In order not to suppress suddenly and completely a state to which the system has long been accustomed, and not to expose the patient to a disturbance which might not be free from inconvenience; besides, experience has shewn that when we have destroyed the more voluminous tumour when there are two, or the most voluminous ones when there are more, those which remain diminish and give much less inconvenience. The cauterization of the largest hemorrhoid, when well performed, often prevents the others coming out, and the ulcerations, if such exist, being no longer subjected to a continual friction against one another, cicatrize, and the patients enjoy as good health as if they had been completely freed from them. Consequently, a different mode of proceeding would be at least useless, and might sometimes be dangerous. If, contrary to what usually occurs, the patient should subsequently suffer, recourse might be had to the operation, which would not then be more severe than before, and would remedy an inconvenience which we sometimes meet with, but which much more frequently does not present itself.

In ordinary cases I employ my forceps in the form of a compass with protecting blades,—more convenient when it is necessary to carry the cauterization to an elevated point of the rectum,—but in the case of which I am now speaking, I prefer the T-forceps of my father, or those which I have had made on the same plan, with very slight modifications. In fact, when there are voluminous hemorrhoids, with more or less extensive prolapse of the mucous membrane, the tumours expanding largely externally, it is very easy to cauterize their base.

Since the month of June, 1844, the period of the construction of my first grooved forceps for the cauterization of internal hemorrhoids, we have subjected both the instruments and the operative manipulation to numerous modifications, which have made the operation so simple that a perusal of the description of it will render its application easy; and already distinguished surgeons, among whom I would mention MM. Maher, J. Roux, and Laurencin, Professors in the Schools of the Imperial Marine, MM. H. Larrey, Barthelemy, Martin

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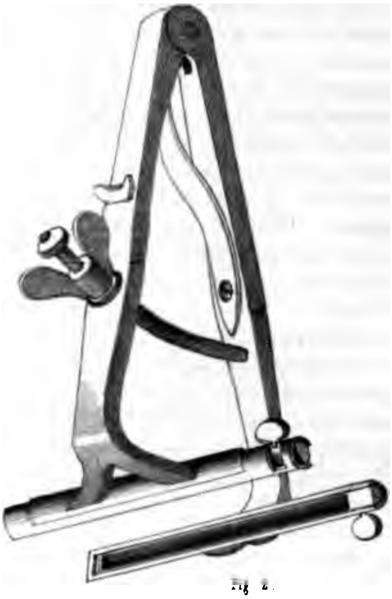

Fig 2.

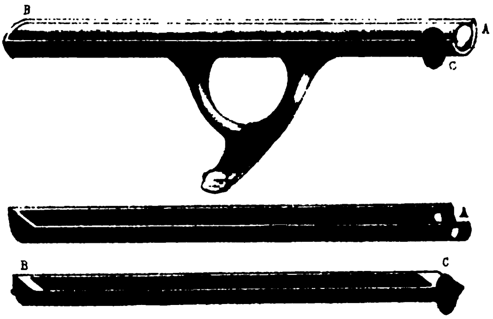

Fig 3

T. Sinclair's lith Phil

Sainte-Ange, Thirion (of Namur), Mascarel, &c., have employed this proceeding with success, using instruments made on the model of ours, or having the greatest analogy to them.

The T-shaped porte-caustique forceps of my father, a drawing of which is given above, was made on the model of a little forceps he used for rupturing the internal membranes of arteries, in order to facilitate torsion. This instrument is composed of two legs, united at one of their extremities by a spring; at the other they are furnished with two grooved semicircles of steel, perpendicularin their direction, and so arranged as to oppose one another when the forceps is closed, or when it embraces the base of the tumour which it is wished to cauterize. Two small sliding plates, having a movement of rotation around the grooves, which are cylindrical, have at one of their extremities a small handle, intended to be used for moving them, and consequently to cover or uncover the caustic when it is thought advisable to do so. A screw is used for tightening the legs of the instrument. The two sliding plates, to which I have given the name of protectors, have partly replaced the preserving forceps which we originally used for completely isolating the tumours from the surrounding parts previously to cauterizing them. When the protectors are placed in front of the grooves, the caustic being entirely covered, we may seize the tumours, let them go again, take hold of them, or slide the grooved semicircles to a greater or less height without the patient experiencing the slightest painful sensation.

To fil lthe grooves of the instrument, I employ Filhos' caustic in paste, or solid. The caustic paste is made by throwing a sufficient quantity of pulverized Filhos' caustic into a saucer, adding some drops of alcohol or eau de Cologne, and triturating the mixture with a spatula. When the paste has the consistence of ordinary honey it is placed in the grooves, and covered with the protectors. To fill them with solid caustic, the latter is poured into them while in state of fusion.

I have had forceps made on this model with but a very slight difference, as may be seen by the figure on the opposite page. This instrument, to which I have given the name of *pince porte-caustique a etau* (these instruments have been made in the manufactories of M. Charriere), constructed at once on the model of my father's forceps, and of a little hand-vice, differs from his instrument in this, that the grooves which are movable on their axis, being placed in other grooves, attached to the legs of the forceps, may be withdrawn, and have the fused Filhos' caustic easily poured into them; besides the resistance of its legs admits of the tumour being compressed as with a vice, and of the production of mortification by pressure. This forceps acts then at the same time by cauterization and pressure combined, and allows us to operate more rapidly, since each of these actions is separately sufficient, though it requires more time, to accomplish the mortification of the tumour. When about to use these forceps, the grooved pieces are withdrawn, and fused Filhos' caustic is poured in so as to be level with the edges without overflowing them; should it overflow, it must be rubbed off with a cloth, or a piece of pumice stone, until it is exactly level; the two little grooves are then enclosed in a ground glass stoppered bottle filled with powdered lime, in order to preserve the caustic from the contact of the air, and from moisture. At the time of operating they are well wiped and replaced in the forceps, and turned round, so as to cover the caustic until the moment when it is to act upon the tissues. To effect the cauterization in this particular case I prefer the T-forceps, because their grooved portions being parallel, they exercise upon the tissues a pressure in every sense equal; but this operation may be performed with the different forceps which have been invented for cauterizing hemorrhoids; we may, even more easily than in other cases, cauterize the tumours with a cone of Filhos' caustic, as I shall hereafter describe.

Internal hemorrhoids are often complicated with corresponding external hemorrhoids, or rather with swellings forming two rows of superposed tumours. Experience has proved that it is not necessary to destroy the external swellings—they die away when the internal hemorrhoids have been destroyed by caustic.

The operation having been decided on, I generally prepare the patient for several days previously with depuratives, baths, and mild regimen, even venesection, if it should appear necessary; and the evening before the operation I prescribe a purgative of cold drawn castor oil, in order to unload the bowels, and to prevent the occurrence of alvine evacuations for two or three days at the least.

The articles necessary for the operation are: one or two porte-caustique forceps; pulverized Filhos' caustic; alcohol or eau de Cologne; a sheet folded square; a piece of oilcloth; a syphon for continuous irrigation; a syringe, or a clyso-pump; two large vessels, one to contain cold water intended for the irrigation to be carried on during the operation; the other to receive the fluid when it shall have passed over the anus.

Before the operation the bed on which it is to be performed should be arranged. The folded sheet is placed across it, and is covered with an oilcloth reaching to the vessel placed under the edge of the bed, to receive the water projected during the operation; and in order that the latter may flow off easily, the two inferior angles of the oilcloth should be pinned together, so as to form a channel to carry the water directly into the vessel intended to receive it.

The patient, having taken a lavement during these preparations, passes it again, at the moment of operation, into a vessel left near the bed, and then lies down, still keeping up the efforts at expulsion, which are indispensably necessary to allow the surgeon to place the forceps properly.

The position of the patient which I prefer is the same as that for the operation for fistula in ano. Doubtless, if the patient were on his knees, or placed as for the operation of lithotomy, he would be better circumstanced for keeping up the efforts; but notwithstanding the advantage the operator might have by employing one or other of these positions, I have renounced them on account of the fatigue the patients experience—a degree of fatigue which once seemed to me to have occasioned syncope.

I am not in the habit of submitting my patients to the action of anæsthetic agents unless they earnestly request it; knowing by experience that the operation is not sufficiently painful to render their employment necessary, for under the influence of the very strong compression used, and of the douches of cold water, the pain is easily borne. During the operation the patient feels a pinching which, in a great measure, masks the pain of cauterization, and consequently only complains of the latter at the moment of the withdrawal of the instrument. This smarting, besides, is diminished rapidly enough by the means I employ immediately after the operation. Two assistants placed at the sides are engaged in holding back the neighbouring parts; a third is occupied in directing a continued stream of cold water on the anal region. Strictly speaking, one assistant, and that even a non-medical person, might be sufficient, as he would only have to work the piston of the instrument, for the operator could direct the current of liquid with the left hand, while he held the forceps in the right, but it is much more convenient to be assisted by several persons.

The patient having been placed on the bed in the manner described, and continuing the efforts at defecation made in passing the lavement, the assistants carefully keep back the surrounding parts. The operator, holding in his right hand the porte-caustique forceps with its troughs covered, so as to be able to touch the tissues without causing the least painful sensation, seizes the tumour gently, without compressing it, and desires the patient to make efforts, if possible, still more energetic, in order to allow him to pass the instrument to the height he judges advisable. This period of the operation, very important in all cases, is especially so in this. When the forceps is well placed, he tightens the screw sufficiently to prevent the tumour escaping, but so as to be able, with ease, to turn the grooved pieces or the protectors. When the caustic is in contact with the tissues, the instrument is tightened as much as possible, but gradually, in order to bring the compression to its maximum. By acting thus, the duration of the operation is shortened, and the pain is diminished, the patient most frequently complaining only of the pressure. The douche of cold water is immediately commenced, and continued while the operation lasts, which varies from two to four minutes. With strong forceps and fused caustic two minutes are longer than is necessary for cauterization. The time, however, as may be supposed, varies according to the bulk of the tumours to be destroyed.

The instrument is then gradually loosened and withdrawn, care being taken to re-cover the grooves to prevent the caustic touching the neighbouring tissues. The assistants should keep the parts separated, and the patient should be again desired to make efforts at expulsion, that the cauterized tissues, on which a little caustic, the action of which is not yet over, still remains, may not cauterize those which should be protected.

The operation being over, the douches of cold water both on the anus and internally should be continued so as to neutralize the last portions of caustic which may not have acted. I have often, with advantage, applied olive oil or vinegar and water to the cauterized parts.

Should a porte-caustique forceps not be at hand, the operation might be performed as follows:—The patient having been placed in the position I have described, and the same preparations having been made, the tumour it is wished to destroy should be seized, as high as possible, with an ordinary dressing or dissecting forceps, and cauterized directly, by placing in the centre a stick of Filhos' caustic cut into a conical shape, to which a rotatory motion should be given to make it penetrate the hemorrhoid, so as to destroy it centrally and laterally. It would be necessary, during the operation, to protect the surrounding parts with spatulas or paper-knives, and afterwards to wash the cauterized tumour with slightly acidulated water, so as to neutralise all the caustic which might not have combined with the tissues. The subsequent treatment should be precisely the same as in the ordinary proceeding.

Immediately after the operation, the patient is placed in a large bath, and when the tumours have been bathed for some moments, they are returned. He remains in the bath for an hour, and sometimes longer, and always experiences great relief from it; for it is then he feels the action of the caustic, which had, during the operation, been masked by the pressure.

On coming out of the bath, cataplasms of linseed meal enclosed in muslin bags are applied to the anal region, or irrigations of tepid water are directed to the part if smarting is still felt. The pain which patients experience after the operation is very variable; I have seen some who felt very acute smarting for twenty-four hours; but with the majority the painful sensation is, after some hours, but slight, if the precautions already mentioned have been observed. Some of my patients do not go to bed even the day of the operation; in general they remain sitting or lying on a sofa—for walking causes pain—and they are unable to go out for some days; elderly patients generally keep their room for a fortnight.

After the operation, I allow but little nourishment, and that of a nature admitting of easy assimilation, in order to avoid action of the bowels, which always occasions acute pain. When the patients feel a desire to go to stool, I advise them to inject into the rectum two ounces of lard melted in a water-bath; it is useful in facilitating the passage of the fæcal matters, and in diminishing the smarting caused by the motion. A tepid sitz-bath should be taken immediately after the stool. Sometimes I give, during the treatment, a gentle purgative, in order to remove constipation when the eschar is not yet detached; while it is, on the other hand, advisable that the patient should not go to stool at the time when the cauterized tumour is separating, in order to avoid the flow of blood which might then take place. An examination of the parts enables us to get a glimpse of the cauterized hemorrhoid, and to ascertain whether elimination proceeds more or less quickly; experience, however, has shown that, in general, the older and weaker the patients are, the more slowly this process goes on. The falling off of the eschars requires a very variable time, generally from five to eight days; I have seen some become detached at the end of seventy-two hours, while in other patients they were still adherent fourteen days after the operation. To render the consequences of the operation as favourable as I have described, the patient ought to take every day several sitz-baths at a moderate temperature, rather cool than warm, to keep cataplasms or water-dressing constantly on the anal region, and to use a very light diet. When the swelling has disappeared, the same treatment should be continued for some days, but the nourishment may be gradually increased; we may then, with advantage, form our opinion of the result of the operation, and decide whether it is necessary to cauterize other hemorrhoids.

Such are the operative manipulation and the treatment I employ in the affection under consideration; the following cases will enable the reader to judge of their practical value.

[The author then details a case of internal hemorrhoids, with prolapse of the mucous membrane of the rectum, treated with circular cauterization of the base of the most voluminous of the tumours, with a T-shaped porte-caustique forceps with projecting plates, and terminating in cure. The patient was a merchant, sixty-eight years of age, of temperate habits, but always subject to constipation. From the age of twenty-six he had suffered from hemorrhoids, accompanied by losses of blood, and it appeared that every two months he experienced a sort of very painful hemorrhoidal crisis, followed by a flow of blood which brought relief. During the last ten years the tumours had come down while walking or making efforts at defecation, and as the inconvenience and pain attending them continued to increase, Dr. Nacquart, on the 11th December, 1846, called in the author and his father. The operation was performed on the 14th, and lasted two minutes and a half; the following day there was headache and slight fever, which, however, soon passed away. On the 21st, the shreds of the cauterized hemorrhoid had fallen off, the volume of the tumours becoming progressively less. On the 25th, notwithstanding the efforts the patient was encouraged to make, nothing was found in the situation of the cauterized hemorrhoid but a small, granulating, suppurating surface; the external tumours being, at the same time, very much flattened. On the 4th of January, the patient informed his attendants that his efforts at defecation had ceased to be attended with any protrusion; he was able to sit and to walk for a long time without feeling pain, and the external swellings had almost disappeared. The author saw this patient again on the 8th of March, 1852; since the operation, he had enjoyed a degree of health to which he had previously been a stranger, and the result of the cauterization had continued as just now described.]

[The second case described by the author, of which, as well as the remaining cases, we shall, as we have done in the preceding instance, give only an abstract, was likewise one of internal hemorrhoids, with prolapse of the mucous membrane of the rectum, and was cured by circular cauterization of the base of the tumours, with a porte-caustique forceps. It occurred in an attendant in a workhouse, aged forty-six, of strong constitution and good general health, except that he had always been subject to constipation, and had for the last fourteen years, suffered from piles, with frequent pains about the anus, and discharges of blood at stool. The hemorrhoids had latterly greatly increased in volume, and came down when the bowels acted, bringing with them a portion of the mucous membrane of the rectum; so that the patient was careful to go to stool in the evening, because the tumours returned more easily during the night, while in the daytime he had much difficulty, and often failed in returning them; at such time the friction of the shirt caused great pain, and frequently the patient could scarcely sit down. His general health becoming impaired, he applied to the author's father, who, on the 1st of March, 1848, made a circular cauterization of the left half, circumscribing the base of the tumour with a T-shaped porte-caustique forceps with protecting plates, charged with Filhos' caustic, and placed as high as possible.

The cauterization lasted about three minutes; the patient suffered little, and the cauterized hemorrhoid separated on the fourth day.

On the 15th of March, 1848, the patient was examined by MM. Lallemand de Montpellier, Beauvieux, Remondet, and Chaussat, who ascertained that but half of the hemorrhoidal swelling remained. This was removed by a second application of the T shaped forceps, charged with caustic, and allowed to remain on for three minutes. On the fourth of April, the mucous membrane of the rectum had ceased to come down, the linear cicatrix of the cauterized hemorrhoids was situated about the fifth of an inch above the orifice of the anus.

This patient was seen again on the 5th March, 1849. The cure was complete; he no longer suffered at stool, there was no hemorrhage, and the constipation had ceased. No trace of the hemorrhoidal tumours or of the mucous membrane of the rectum was perceptible externally.]

The foregoing case affords an illustration of the difficulty we sometimes experience in forming an accurate diagnosis of the affection. In fact, on the first examination I made of the anal region, I thought the patient suffered from a simple prolapse of the mucous membrane of the rectum, and were it not for the abundant losses of blood he had, joined to his other antecedents, I should have thought this was his disease. But on a second investigation, made after the administration of a purgative, the vascular element became much more apparent; there was no longer any doubt that hemorrhoidal tumours existed with prolapse of the rectal mucous membrane. We see from this how useful it is to examine patients after the administration of a purgative, in order to be able to establish with precision the diagnosis of the affection. As to the surgical treatment, it ought, I think, to be the same in both cases, as I shall show at the close of this essay.

[The third case was one of—

Internal Hemorrhoids with Prolapse of the neighbouring rectal mucous membrane; Circular Cauterization of the base of the most voluminous; Cure.—The patient, aged fifty-four, of strong constitution, had enjoyed excellent health to the age of eighteen years, when he got syphilis, for which he underwent a full course of treatment. At the age of nineteen, being garrisoned on the frontiers of Spain, he was attacked with intermittent fever of a tertiary type, which lasted eighteen months; from that period he enjoyed good health until he attained the age of forty, when he quitted active military service to enter an office under the Minister of War. This change of life was not advantageous to him, for in 1843 he began to experience general *malaise*, headache, oppression of the chest; he lost his appetite, became dyspeptic; suffered from severe attacks of pain at the anus, in the abdomen, and sometimes in the genital organs; he occasionally felt great smarting in the urethra while passing water. His motions became difficult and painful, and to relieve his sufferings he had frequent recourse to baths and lavements.

In 1848 the hemorrhoids, which had not hitherto appeared externally, began to come down; he lost blood at distant intervals, which gave him some relief.

In 1849 his digestion improved, but he lost blood every day, and was besides obliged to return the part every time he went to stool.

In 1850, the affection becoming worse, he could not go out, or walk without the inconvenience of feeling the hemorrhoids come down, and experiencing severe smarting; besides, the friction of the tumours against one another produced ulceration, and his linen was stained with muco-purulent matter. He was constantly obliged to return the hemorrhoids, which soon protruded again. In January, 1851, he came with Dr. Laurand to consult the author. A simple examination showed the existence of a large hemorrhoidal tumour, beside which was a smaller one; the epithelium was rubbed off for a certain extent at the point of contact of the tumours; there was, moreover, prolapse of the mucous membrane of the rectum, especially at the base of the more voluminous of the tumours. It was determined to cauterize the latter. The operation was performed on the 1st of February, and on the 10th the hemorrhoid, which was blackish and shrivelled, separated. On the 13th the patient was advised gradually to increase his diet; on the 14th he had a motion for the first time, and from this period he returned to his usual mode of life, resuming the duties of his office on the 16th. The cicatrization progressing slowly, he applied rhatany ointment to the anus twice a day, and was soon completely cured.

On the 13th of April, the author wishing to have a drawing made of the cicatrix left by the separated hemorrhoid, requested the patient to make every effort to bring it into view; but it was filiform and linear, and so difficult to see well on account of the mucous membrane at that side not coming down, that he had to renounce the design. The smaller hemorrhoid, which before was seen externally, scarcely appeared. The bowels acted every day without pain, and the patient was free from all inconvenience.

The author saw this gentleman again about a month before the publication of this essay, and ascertained that the result of the cauterization continued such as has just now been described. The patient's general health was remarkably improved, but he occasionally experienced a feeling of tension towards the extremity of the rectum, which he attributed to his sedentary life; the author advised him to take as much exercise as possible, and carefully to avoid constipation, which would very probably occasion the development of the small tumours which still existed.]

[The fourth was one of—

Very voluminous Hemorrhoids, with Prolapse of the mucous membrane of the Rectum; Circular Cauterization of their base with caustic potash and lime; Cure. The patient was a Wallachian prince, aged 52, who had been operated on with the ligature for internal hemorrhoids by the author's father in 1836, and returned in May, 1848, labouring under the same affection. Since the former operation, new hemorrhoids had become developed, and produced great inconvenience. Efforts at expulsion showed the existence of two large hemorrhoidal tumours occupying the entire of the anal orifice, with decided prolapse of the mucous membrane of the rectum. One of the tumours was at the right, the other at the left of the anus; numerous hemorrhoidal vessels existed.

On the 6th of May, 1848, an operation was performed by M. Amussat, sen., which consisted in seizing the right-hand tumour with his T-shaped porte-caustique forceps, so as to include not only the base of the tumour, but also the prolapsed portion of the mucous membrane; the instrument having been firmly placed, and the tissues sufficiently compressed, the round pieces were uncovered by giving a rotatory motion to the protecting plates, and the screw was again tightened, so as to compress the tumour strongly. The operation lasted three minutes. The eschar became detached, and the cicatrix formed so quickly that on the 23d it was difficult to see it, on account of the retraction which the tissues of the right side of the anus had undergone.

The pathological state of the anal region appearing remarkable, the author obtained permission to have a drawing made of the remaining tumour.

On the 26th, twenty days after the first operation, the circular cauterization of the pedicle of the left hemorrhoidal tumour was performed in the manner just described. The pain was slight, and the patient felt so well the next day that M. Amussat found him in his drawing room seated on a sofa.

On the 29th an examination of the anus having been made after a motion, neither hemorrhoidal tumour nor prolapse of the mucous membrane could be discovered. The prince soon after left Paris for Wallachia, completely cured.

In the month of August last the author received a most satisfactory account of his patient, his general health was much improved, and he was in the habit of walking about three leagues a day. This exercise, of which he was completely deprived while he had the hemorrhoidal tumours, contributed much to the favourable state of his health, and the author was led to hope that new tumours would not become developed, although the affection under consideration is very common in the country the prince resides in.]

The fifth case is headed *Voluminous internal Hemorrhoids, with Prolapse of the rectal mucous menbrane; Circular Cauterization of the largest with my T-shaped porte-castique forceps, with the grooves movable on their axes; Cure.*—M. S., aged forty-eight, came to consult me in the end of January, 1851, for an affection which, because her linen was constantly stained with purulent matter, she supposed to be a fistula. On carefully examining the affected parts, I ascertained the existence of two internal ulcerated voluminous hemorrhoidal tumours, with prolapse of the rectal mucous membrane, and some small varicose tumours at the edge of the anus; there was no fistula. The purulent discharge, which had deceived the patient as to the nature of her malady, came from the surfaces of contact of the hemorrhoids, which were superficially ulcerated. On questioning Madame S. as to the history of her case, I learned that, although of a delicate constitution, she enjoyed tolerably good health up to the time when the hemorrhoids had acquired some degree of development. She was the mother of four children, after the birth of each of whom she had hemorrhoids for a time, but then the affection rapidly disappeared, and did not return until the next confinement.

Each time that the hemorrhoids appeared under these circumstances they discharged much. In 1848, when she had been for several years free from them, they came on after much anxiety, and, in spite of the adoption of all ordinary means, they did not disappear; gradually they even increased in size. In 1849 they began to come down after each motion, and were always accompanied with discharge of blood.

In 1850 the affection advanced still further; the tumours became more painful and much more difficult to return. During the latter six months of that year the patient could not succeed in reducing them, with much pain and trouble, until two or three hours after each evacuation. Her digestion became more disturbed; she had frequent attacks of colic; her strength diminished so much that she was scarcely able to take any part in domestic matters; and she soon became unable to use anything but a little *cafe au lait* or very light soup. She then decided on consulting me, and on submitting to the operation I proposed to her.

On the 3rd of February, 1851, in presence of Dr. Cruveilhier, Surgeon-Major of the 62nd regiment of infantry, I performed the circular cauterization of the more voluminous of the tumours, situated at the right of the anus, with a T-shaped forceps, made after the model of my father's, but with the grooved pieces movable on their axes, admitting of the caustic being covered and prevented acting until the moment it was thought advisable. The operation was performed as I have already described; the cauterized part was well washed with cold water, and smeared with olive oil. The patient took a bath, in which she remained for an hour and a quarter; on coming out of it warm poultices were kept continuously applied to the anal region. The smarting felt after the operation gradually subsided. The cauterized hemorrhoid had, on the 10th, completely disappeared; on the 12th, with the aid of a lavement, the patient had a motion, and passed a little blood. An examination made on the 22nd showed that, in addition to the disappearance of the cauterized tumour, the mucous membrane no longer protruded, and that the second tumour came down in a much less degree.

From this period Madame S. ceased to lose blood, or to have any purulent discharge; her digestion improved; the attacks of colic did not return. She still occasionally felt pains about the anus, but which were nothing in comparison to those she had before suffered. The following is the report of the 6th April, 1853:—The hemorrhoid of the left side comes down less than before the operation, and is no longer ulcerated; the small varicose tumours at the circumference of the anus seem to have increased a little in size; the right side appears as if there had never been either tumour or prolapse of the mucous membrane.

In order to give a still more complete and exact idea of the affection to which I have endeavoured to call the attention of the profession, I have added the annexed drawing,* taken from nature, of hemorrhoidal tumours, with prolapse of the mucous membrane of the rectum, on which I shall shortly operate by the process I have described. The patient is in the habit of supporting these tumours with a spring bandage, furnished with a ball of gum elastic. The constant pressure of the ball upon the anus has produced a dilatation of the sphinc-

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* The drawing alluded to is omitted, not being necessary to the complete understanding of the text.—[*Ed. Va. Med. & Surg. Journal.*

ter, which allows the tumours to come down when they are not supported.*[*] I might easily have brought forward a greater number of facts, but those I have recounted will suffice, I think, to prove the simplicity and the safety of the operation I have described. I may add, that MM. Hippolyte Larrey, Martin, (Saint-Ange), of Paris; Dr. Mascarel, of Chatellerault; MM. Maher, J. Roux, Laurencin, Professors in the schools of the Imperial Marine, have kindly communicated cases of patients successfully operated on according to my plan. Lastly, MM. Barthelemy and Jobert,[†] who formerly gave an exclusive preference to

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[*] We have, however, seen many cases of hemorrhoidal tumours, and of prolapse of the mucous membrane of the rectum, in which the greatest benefit has been derived from the support given by an anal truss, manufactured by Mr. Duff, of Molesworth-street, in this city. This instrument consists of a steel spring, well padded and covered with leather, passing round the hips, and furnished in the part which rests on the sacrum with a little cushion. To its centre posteriorly is screwed a steel plate, perforated with three or four holes over one another for the admission of the screw; attached to this plate, by a joint admitting of lateral flexion, is a rod of steel also covered with leather, descending vertically, and terminating in a rounded cone of ebony, and so curved that the latter shall rest against the anus. The length to which this rod descends can be increased or diminished by screwing the plate of steel above mentioned, at one or other of the holes, to the horizontal spring. As an illustration of the effect of this instrument we may mention the case of a medical man, then aged 38, who had for five or six years suffered from a gradually increasing prolapse of the mucous membrane of the rectum, which had in the commencement of 1851 attained such a height that he was unable to walk more than a quarter of a mile without the membrane protruding and becoming painfully strangulated. This was attended with a copious discharge of mucus, which rendered his state uncomfortable in the extreme. Almost every action of the bowels was accompanied by copious hemorrhage. A loss of both red, and what Sir Henry Marsh has so well termed white, blood was thus taking place, which must soon have undermined his health. An eminent surgeon gave his opinion that operation was indispensable. A truss was, however, procured, and, having been properly adjusted, was worn with the effect of wholly preventing the occurrence of the prolapse. As a consequence, the discharge of mucous and the hemorrhages have altogether ceased, and all annoyance has been entirely removed. The tendency of the use of the instrument is, moreover, by preventing the descent of the parts, to promote their contraction, and thus, if the bowels can be duly regulated without the irritating effects of medicine, to lead to a real cure. It is better to use the instrument only at such times as the patient is likely to be actively engaged. Due attention should of course at the same time be paid to the avoidance of much standing, sitting on hard seats, straining at stools, or lengthened attempts at defecation. We have never seen the dilatation of the sphincter above alluded to produced by the use of this instrument, and we think it will be found that there are few cases of hemorrhoidal tumours, or of prolapse of the rectum in which the necessity for operation may not be indefinitely postponed by it, and where, under favorable circumstances, even a cure may not eventually be reasonably looked for.—*Trans. Dublin Quarterly Review.*

[†] M. Jobert de Lamballe has recently published a new mode of cauterizing hemorrhoidal tumours *en masse* by means of caustic potash with lime. This surgeon

the actual cautery, have now abandoned it, and employ instead the caustic potash with lime. As the details I have given in describing my operation appear to me sufficient to enable the reader fully to understand its several stages, and with ease to put them in practice, I shall not return to that part of my subject; but I think it useful to dwell for a little on its sequelæ, and the consequences which may result from it, for the rule of conduct I have adopted is the result of an experience based on the numerous facts I have observed during more than ten years.

The two or three minutes which I judge necessary for the cauterization having elapsed, the forceps is removed, care being taken that the caustic it contains shall not touch the neighbouring parts, and the injection of cold water, which has not been interrupted during the operation, is continued. The jets of liquid should be directed chiefly to the linear depressions formed by the instrument, in which the caustic is situated, in order to remove particles which may not have chemically combined with the tissues. It is at this time especially that the patient feels the cauterization, which is no longer masked by the pressure of the forceps, and the cold fluid pouring on the tissues has, in addition to the effect just mentioned, that of acting as a local anæsthetic. When the parts have been washed sufficiently to have removed all the caustic, the tumours are carefully smeared with olive oil, and returned into the rectum. The oil both serves to facilitate the reduction, and, to a certain degree, protects the tissues by combining chemically with the alkalies, should any still remain.

Small quantities of cold water are also thrown into the rectum, and allay the pain, and afterwards the patient is placed in a cold sitz-bath, or, better, in a full sized bath at an agreeable temperature, which will, of course, vary according to the time of the year. In this he generally remains about an hour, being guided in this respect by his own sensations.

Generally speaking, on coming out of the bath, the pain, which has gradually diminished, is very slight; occasionally, however, in very nervous persons, or when the caustic has not been completely removed from the tissues, it is still severe. In this case we advise the patients to return to bed, and to place them-

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seizes the tumours with a double arch of silver, which forms a sort of capsule, and covers them with Vienna paste, which he leaves applied for some minutes. The only patient on whom this operation has been performed had hemorrhoids of ordinary size, and two successive applications of the paste were necessary to destroy them. This mode of operation cannot be compared with the circular cauterization of the base of the hemorrhoids I have described. By my proceeding, in fact, the caustic is applied on a surface of but very limited extent, and the pressure of the forceps, combined with the continual irrigation with cold water, so moderates the pain of the operation that it is only exceptionally I have recourse to anæsthetic agents. Moreover, the pain which follows the operation is much less than in M. Jobert's proceeding, the cauterized surface being less extensive. His plan can only be compared with the mode I formerly pursued with a stick of Filhos' caustic. The latter proceeding possesses the advantage of not requiring a special instrument, and besides, the solid caustic acting more quickly than the paste, the operation lasts a shorter time, and I have never been obliged to repeat the application.

selves in a position similar to that they observed during the operation, while a continued douche of water, which in winter should be tepid, in summer cold, is directed against the anal region. I have known some to find it more convenient to substitute for the douche, continued applications of lint dipped in cold, sometimes even iced water, and very frequently renewed. This latter means, though undoubtedly efficacious, should be employed with care, so as to avoid the reaction which is apt to set in when it is suspended or left off. Other patients remain all day in the sitz-bath, the temperature being kept up by the addition, from time to time, of warm water. I once attended, with my father and Dr. Pouget, a person who, after the cauterization of two tumours, remained in a sitz-bath almost constantly for a week; he said he was very well in it, and not the slightest bad effect resulted from this protracted use of it.

Most frequently two or three sitz-baths during the day, small continued douches, with poultices on the anal region in the intervals, constitute the local treatment.

This plan should be persevered in until the wound is almost completely cicatrized, especially if the least sign of inflammation should be observed.

The only nourishment I allow is strong beef tea, and I recommend the patient to keep his bed for two reasons: first, because by so doing, he bears the restricted diet better; and secondly, because the bowels are then less liable to act. Those who will not submit to this plan are obliged at once to take a more substantial diet, the result of which is stools, which are more painful in proportion as they occur nearer the time of the separation of the eschar.

Frequently a dysuria comes on which lasts some hours, and subsides spontaneously, for I do not remember having had recourse to catheterism in a single instance. There is generally swelling, sometimes partial, sometimes general, of the areolar tissue about the anus. The patients complain of it a little, and generally think it is the hemorrhoids which have come down. I employ only the local means I have mentioned, and if the patients are very irritable, I have the poultices sprinkled with a little oil and laudanum. I sometimes give on the first night a composing draught with syrup of poppies. The state of the patients is generally so satisfactory on the following days, that they complain only of the diet and rest which are imposed upon them.

At the end of three, four, six, eight, or twelve days, portions of sloughs will be seen on the poultices, indicating that the mortified tumours are thrown off, of which the characteristic odour they diffuse likewise gives notice. The broth diet is continued as long as the patient does not complain too much of it, and in this way the work of elimination and reparation goes on very well, as there is nothing to interfere with it. I endeavour to postpone the first motion as long as possible, without, however, annoying the patient too much. When he feels a repeated desire to go to stool, which generally occurs at the end of six or eight days, I direct two or three ounces of lard melted in a water-bath, or a lavement of decoction of marsh-mallow, to be thrown into the rectum. The introduction of the tube should be managed with the greatest care, so as not to irritate or injure the wound. This duty should be entrusted to an assistant or an intelligent nurse.

The first stool is always rather painful, and the patient passes a few drops of blood; in two of my patients two or three ounces were lost without any bad effect except some increase of weakness, which I met by improving the diet. If the exclusive use of beef tea does not become too repugnant to the patient, which generally takes place, I induce him to continue it for some days, being guided by the time at which the eschars fall off and the probable state of the suppurating surface, the extremity of which can generally be seen at the anal orifice. It is unnecessary to observe, that I discontinue the baths as soon as the pain about the anus has ceased, as they would, along with the restricted diet, lower the patient too much. My object in continuing the exclusive use of the broth is to postpone the second motion, and to render it as small as possible. If, however, this diet does not sufficiently support the strength, or if disgust comes on, I substitute fresh eggs, gravy, and a little bread or pastry, gradually increasing their quantity. The second stool usually takes place from the twelfth to the fifteenth day, and ought to be preceded by the precautions I have detailed in reference to the first. The patient now begins to resume his ordinary mode of life, a great many go out, and some return to their occupations, taking care, however, to use an occasional sitz-bath, to foment the anus with tepid water several times a day, and particularly after having been at stool.

Such are the phenomena I have observed, and the measures I advise, after the circular cauterization of the base of hemorrhoidal tumours, whether simple, or complicated with prolapse of the neighbouring rectal mucous membrane; and from what I have stated it will be easily inferred that not only have I never lost a patient in consequence of the operation, but I have never had reason to be uneasy about my patients. I may add, that in no case have I observed the slightest symptom of pyemia to arise.

It would, perhaps, now be well to compare this new mode of treatment with those in ordinary use—the ligature and excision: but to draw this parallel would lead me beyond the limits of the present essay; it may suffice to remark, that I have never observed the nervous or phlebitic attacks to result from the new plan which have been attributed to the ligature, nor have I ever witnessed the hemorrhages and purulent absorptions to which excision occasionally gives rise. In a future essay I shall examine, comparatively, the other modes of cauterization employed in the treatment of hemorrhoidal affections.

It will, no doubt, have been remarked, that the five cases I have quoted are those of patients advanced in life; the remaining facts which have come under my observation confirm the opinion generally received in reference to this affection, namely, that it is more common in those who have passed forty years than in younger persons. It may be fairly asked if it is advisable to cauterize hemorrhoidal tumours in old people, and especially when, being of long standing, they have become habitual and constitutional. As I have already said, I never take away all the tumours, confining the operation to those which give most annoyance; and although it has been objected that in acting thus we do not completely remove the affection, and that the tumours which are left may subsequently be developed, and oblige the patient to undergo the operation anew, still, as this reproduction has hitherto been very rare, and as my plan has always been attended with fortunate results, I think it right to persevere in the same line of conduct. In a word, I am of opinion that we ought only to remove the tumours which are really prejudicial to health.

Among the advantages which result from the operation, I shall point out, first, the cessation of that constant and great irritation caused by the protrusion and perpetual friction of the tumours against one another. This friction quickly removes the epithelium from the surfaces which are in contact; the patients feel an incessant smarting, which enervates them; a weakening, muco-purulent discharge is set up at a period of life when losses suffered by the system are repaired but slowly and with difficulty. Moreover, the sufferers are debarred from the little exercise their lower limbs would still allow them, by the fear of its producing an aggravation of their state. It is rarely, too, that the phenomena of digestion are not more or less disturbed; the advantages to be derived from terminating such a state of things will be at once apparent.

Double care should, however, be taken after the operation to guard against metastatic engorgement of the organs of respiration or of the liver; of such the physician should be particularly watchful, especially at first. I may add, that spring should, if possible, be chosen for the performance of these operations, so as to have the fine season for the period of transition.

It was my original intention to have closed my essay here, having, I think, sufficiently demonstrated the proposition I had advanced; but on reviewing the various cases of voluminous and complicated hemorrhoidal tumours I had observed, and reflecting on the comparisons which might be established between the affection I have been speaking of and prolapse of the mucous membrane of the rectum, whether simple or complicated with hemorrhoidal tumours, that is to say, on the cases in which the complication becomes, by its development, the principal affection, as well as on the difficulties which sometimes exist in clearly diagnosing between these two pathological states; I asked myself if an operation which succeeds so completely in one case might not be applicable to the other. The study of the etiology and ordinary progress of prolapse of the mucous membrane of the rectum shows that, most frequently commencing as a complication of the hemorrhoidal affection, it may at length become the prominent ailment in consequence of its development and of the derangements it produces; and it is often true that while the vascular element little exceeds its ordinary limits, the prolapse alone attracts the entire attention of the surgeon.

Is not, in both cases, cauterization with a porte-caustique forceps applicable to the mucous tumour protruding from the anus, and may it not be regarded as the logical corollary of the treatment we employ in the cure of hemorrhoids?

Ligature, excision and cauterization have been already employed in the treatment of prolapse of the mucous membrane of the rectum. As in hemorrhoids, ligature has given rise to fatal nervous symptoms, excision to severe hemorrhages; accordingly, these two methods appear to have been abandoned in both cases.

The actual cautery employed by the ancients, especially advocated by Marcus Aurelius Severinus, and described by Sabatier, who proposed to trace burnt lines upon the tumour, by means of an iron wire brought to a white heat, has been successfully practised by Dr. Kluiskens of Ghent, and by several French surgeons.

It appears to me, however, that this process, which I believe to be preferable to the former two, may with advantage be replaced by the use of caustics.

We find in the records of science instances of complete gangrene of the prolapsed part, caused by strangulation produced by the sphincter, with cure. It would, therefore, at once occur to us to seize the base of the prolapse with a strong porte-caustique forceps, so as to induce immediate mortification, as in the case of hemorrhoids, in imitation of what is sometimes done by nature. By acting thus we should probably do more than is necessary, and expose ourselves to the risk of causing a subsequent contraction of the anal orifice.

I think it would be sufficient and preferable, in such a case, to follow the plan I adopt with voluminous hemorrhoidal tumours, namely, to destroy, by the same process of cauterization, the half or two-thirds of the mucous tumour, so as not to have a continuous linear cicatrix.

Such were the deductions I thought might strictly be drawn from the facts I have quoted, when, on the 25th of last August, M. X., a physician in the environs of Blois, who was acquainted with the former part of this essay, came to consult me about his wife, whose case I subjoin, and who was affected with a prolapse of the mucous membrane of the rectum. This very interesting case gives to the proposition I have announced the sanction of an experience recent indeed, but which I hope to establish in a positive manner when time and facts shall have enabled me to make in it such modifications as may hereafter appear to be necessary.

[The case alluded to was one of voluminous prolapse of the mucous membrane of the lower extremities of the rectum, treated by cauterizing the two lateral portions of the tumour with a T-shaped forceps armed with Filhos' caustic; and resulting in cure. The patient, Madame X., aged 63, had always suffered from obstinate constipation; in her youth she was often, when she had not recourse to lavements, ten, twelve, and sometimes fifteen days without a motion. She had also long and alarming fainting fits at the times when the bowels felt as if about to act, and she made violent and prolonged efforts to expel the fæcal matters.

At the age of 54 the patient perceived that the mucous membrane of the rectum protruded externally, but this was not constant, taking place only at intervals of two, three, or four months, and continuing for not more than three or four days at a time. It was preceded by a feeling of general uneasiness, headache, and a sensation of weight and heat in the rectum, and was followed by a tolerably abundant hemorrhage at stool, when all returned to its normal state.

Two years later, without the hemorrhage being more frequent, the prolapse from having been intermittent, became constant when the patient was up, and exhibited itself from the beginning under the form of four non-pediculated tumours, one superior, one inferior or perineal, and two lateral; the superior and inferior being smaller than the two lateral ones. This prolapse became in time more voluminous and more inconvenient, in consequence of the feeling of weight and dragging it occasioned in the uterus and its appendages. The patient, being no longer able to walk a step without putting her hand behind to raise the tumour, except during some hours after rising, when she had the evening before taken lavements, decided on submitting to a surgical operation.]

A lavement having been administered, and efforts at defecation having been made, an examination was instituted. On exploring the vagina with the index finger, I ascertained that the cervix uteri was united posteriorly by a cicatrix such as my father obtains by cauterization in cases of retroversion and retroflexion. Bearing in mind the analogy existing between this affection and that which is the subject of this essay, I proposed to cauterize a portion of the mucous tumour, as if we had to do with voluminous hemorrhoidal swellings. To this M. X. agreed.

On the 29th August, Madame X. having in succession taken and passed two lavements, using as violent efforts as possible, was placed on a bed furnished with a folded sheet and oilcloth, and in the position usually adopted for operating for hemorrhoids.

The prolapsed anus now presented itself, divided by sulci into four parts. Its two lateral portions being the larger, I seized each at its base with a strong T-shaped porte-caustique forceps with protecting plates, and when I had placed the instruments as high as possible, I uncovered the caustic, and strongly tightened the two screws. But as the fissures between the four portions of the tumour were very shallow, I was obliged to add to one of the extremities of each forceps a forceps with porte-caustique rods, charged with paste of potash with lime, so as to make artificially furrows which did not already exist.

Everything having been thus arranged, I caused a current of iced water to be thrown on the anal region with two large Eguisier's irrigators, during the ten minutes that the instruments remained applied. Under the influence of the very strong pressure exercised by the forceps, and of the current of iced water, the patient, a very nervous person, bore the operation so well, that she did not require the use of chloroform, which we had before agreed to exhibit.

The operation being over, I removed successively the small forceps, then the T-shaped forceps, and continued the douches of iced water for about a quarter of an hour, taking care to direct the jet on the points where the caustic had touched.

Having smeared the entire mucous surface with olive oil, I returned it by means of a regular taxis, and the patient was placed in a cool sitz bath, a compress of linen having been fixed on the anal region so as to prevent the protrusion of the mucous tumour. The pain she had experienced after the operation was allayed, soon became very tolerable. In the evening there was a little fever and complete retention of urine, which rendered the catheterism necessary. The retention continued until the 2nd of September, when it ceased. On the 1st of September the patient voided per anum a blackish liquid; this kind of discharge continued for some days. On the 6th, a long portion of mortified areolar tissue was passed. On the 30th, a month after the operation, an examination was made; nothing was visible externally, and it is stated that no protrusion took place at stool. On the following day the patient returned to the country.

Since that time Madame X. has often had motions with scarcely any suffering; but being always constipated, she has frequently passed hard matters covered at first with a little blood, then with purulent matter; moreover, she takes walking exercise without the occurrence of the slightest prolapse.

It will be observed, in perusing the foregoing statement, that I followed in this case, both in the operation and in the subsequent treatment, precisely the method that I have laid down for the cure of hemorrhoidal tumours, namely, the cauterization of a portion of the mucous mass with forceps furnished with grooves filled with a caustic paste, and afterwards a strict diet, with the view of avoiding motions, particularly after the operation; accordingly the consequences have been as simple and as favourable as in the affection I have just mentioned.

Prolapse might, no doubt, be treated with direct cauterization by means of a stick of Filhos' caustic; but this proceeding, though more simple, and not requiring a special instrument, would be more painful for want of the compression, and the continued injection of cold water.

Hitherto the result of the operation has been as satisfactory as could be wished, and it will continue so, if I may judge by the results we have obtained in the treatment of the largest hemorrhoidal tumours.

To recapitulate from the foregoing, I think we may conclude:—

1. That the circular cauterization, such as I have described, enables us to cure hemorrhoidal tumours, and the prolapse of the rectal mucous membrane which accompanies them.

2. That this operation has always been, in my hands, perfectly harmless in its immediate consequences.

3. That the health of hemorrhoidal patients operated on after my mode has eventually improved, contrary to the generally received opinion.

4. That by circular cauterization we may also obtain the cure of prolapse of the mucous membrane of the rectum.—*Bulletin de Therapeutique*, vols. 44 and 45.

THE
VIRGINIA
MEDICAL AND SURGICAL JOURNAL.

Art. I.—*A Glance at the Epidemic of Cholera in a Therapeutical Point of View.** By P. Briquet, Physician to La Charité, etc. etc. [Translated from the *Bulletin Général de Thérapeutique.*]

The epidemic of cholera that lately prevailed in Paris having apparently terminated, it may not be uninteresting to the medical public to know what was observed in the cholera wards of one of the Parisian hospitals, in respect to the *treatment* of the disease. It is generally known, that the administration determined at the outset not to disseminate the victims of the pestilence among the other sick, but to place them in special wards; it was in the service established at *La Charité* for women with cholera that the facts I am about to state were observed.

I believe my narrative will be the more interesting, because it shows plainly that remedies have exerted far more influence on the disease in this than in the two preceding epidemics. Moreover, as cholera is now pervading the provinces, practitioners in remote districts will be glad to learn the results of a systematic plan of treatment, instituted in a number of cases, and to judge for themselves, in some measure, of the value of the means employed.

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* The recent invasion of cholera, with less virulence, it is true, but with greater diffusion in its course; and above all, the likelihood that the pestilence will hereafter be *endemic* in our larger cities, invests this all-important subject with renewed interest at the present time. While, in the literature which teems forth on the footsteps of each new epidemic, there is much that is unworthy of analysis, and very little that merits quotation, we occasionally meet with practical observations like those we now insert, which are instructive and encouraging; which put to shame the skepticism and despair of one class of practitioners, and the arrogant credulity of which the pamphlet on the "Cholera Squeeze," by Dr. Meigs, furnishes such a ludicrous example.—Ed.

I deem it necessary, by way of preface, to state, in general terms, what I conceive to be the nature of cholera. I certainly cannot regard its symptoms as the result of an aggravated form of gastro-enteritis; for patients, whose constitutions were profoundly undermined by antecedent maladies, who died with absolutely nothing but choleric diarrhœa, unaccompanied by any serious symptom, presented at the autopsy, lesions of the digestive tube, precisely resembling what was observed in women who succumbed in the stage of collapse.

Neither do I believe that the symptoms depend on the copious outpouring of the liquids of the economy, for the serous diarrhœa, which abstracts so profusely from the liquids, never induces the algid stage. I have seen women in the cold stage without any precursory symptoms, (*d'emblée,*) who had only a stool or two, or perhaps an attack of vomiting previous to the invasion of cyanosis.

I consider the symptoms of cholera the result of miasmatic intoxication, with alteration of the blood, and an especial determination towards the digestive tube.

That my descriptions may be better understood, I may mention that I shall follow the divisions established in my *Treatise on Cholera* (1849), that is to say, I shall recognize four stages:

1. A first stage of simple chronic diarrhœa, without any other symptom, (*Prodromic Period*);
2. A second stage, called the period of augmentation or phlegmorrhagy,† characterized by the supervention of vertigo, stammering, roaring in the ears, anorexia, vomiting, and alteration of the pulse and countenance.
3. A third stage, called the algid stage (*Cold stage, Collapse*);
4. The stage of reaction, which succeeds the cold stage, after the latter has ceased completely, in which the patients are still under the

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† *φλέγμα, mucus, ρηγνυμ to burst forth.* A designation proposed by M. Gendrin, because in this stage there are *serous discharges* by the mouth and anus.—Trans.

choleric influence, and are attacked, either by cerebral disorders, or by grave visceral inflammations.

Patients Treated in the First Stage.—Thirty-six patients entered my service. Of these, 10 were treated in the first stage; 4 of this last category had entered the hospital on account of other diseases, and were there attacked by serous diarrhœa. In these 10 subjects, the only symptom was the discharge of liquid, white stools, with gurgling over the abdomen, but without colic.

The treatment consisted in every case:

1. In a dose of the wine of opium[‡] of from 20 to 30 drops, administered at the commencement of the treatment.
2. In the administration either of a mucilaginous potion, containing from 30 to 50 drops of the wine of opium, at intervals during the twenty-four hours;[§] or of 2 or 3 grains of the extract of opium, divided into 4 pills, at intervals of 6 hours.
3. In the administration of 4 emollient enemata, each enema measuring a quarter of a pint, and containing 10 or 15 drops of the wine of opium.
4. In a drink consisting of an infusion of mint, or of a decoction of rice or wheat, with the addition of sugar and mucilage.

The patients were put on absolute diet.

The result of this treatment was as follows:

In 7 patients, the diarrhœa was completely arrested in two days on an average (a day and a half *minimum*, 4 days *maximum*). One of the 7 committed an imprudence in diet, 5 days after the cessation of the diarrhœa, and quickly fell into the phlegmorrhagic stage.

The eighth patient was a woman of 58 years, who was in the lowest stage of cachexy, in consequence of an ulcerated cancer of the rectum. In her case, the diarrhœa could not be checked; she passed into the cold stage; her condition precluded energetic treatment, and she died exhausted at the end of eight days. The two last patients were decrepid. Their ages were 61 and 70 years, respectively. One of them, who had phthisis, died in twenty-four hours in a state of exhaustion, after having only a single choleric stool. The other suffered from chronic colitis, with numerous ulcerations in the large intestine. She died 13 hours after entering the hospital, having presented none of the phenomena of cholera, except a few serous dejections previous to her admission into my service.

[‡] The preparation known as *Sydenham's Laudanum* is referred to. The following directions for making it are given in the French codex:

Take of choice opium in fragments *two ounces* (64 gr.); saffron, *one ounce* (32 gr.); cannella, *a drachm* (4 gr.); cloves, *a drachm*; white wine [Malaga] *eighteen ounces and six drachms* (500 gr.) Macerate for fourteen days, express and filter. Fourteen drops contain about a grain of opium, or, more accurately, 20 drops weigh one drachm, and are equivalent to one grain (5 *centigr.*) of the extract of opium.—NOTE BY THE TRANSLATOR.

[§] In one case the dose was raised to 100 drops in seven ounces of vehicle.—NOTE BY THE AUTHOR.

In most of the cases, the use of opiates, in the somewhat large doses I have mentioned, produced no unpleasant effects. Some of the patients did not tolerate the wine of opium and vomited, and it was necessary to substitute the extract of opium. We did not observe that the medicine caused drowsiness or heaviness of the head; sometimes the pupil was much contracted and there was pruritus. Convalescence was prompt.

From these results we may draw the following conclusions:

Simple choleric diarrhœa, which is regarded as a slight affection in healthy subjects, becomes a grave disorder in patients weakened by previous disease.

The general opinion that, in ordinary cases, cholera can be arrested in the first stage is well founded.

It is evident that, in the cases described, the disease was arrested by the medication: for it had existed for different periods in the several cases, and in all it yielded at about the same date of the treatment.

Opium, then, may be fairly considered a specific remedy in the first stage of cholera, endowed with the power of aborting the disease; for the other parts of the treatment, warm drinks, rest and abstinence, can only be regarded as accessories and adjuvants. The essential point is to employ this medicine boldly; the doses required to arrest the disease are not sufficient to cause any accident.

How does opium act? There is no doubt that in this, as in other fluxes, it diminishes the secretions; but I do not believe that this is its principal effect; else I should not have given the large doses I used, and which are generally employed. I believe that, in these large doses, opium acts in cholera, as quinine acts in pernicious intermittent fevers; that is to say, that its action is not limited to stupefying the digestive canal, but that it likewise stupefies the encephalon and general nervous system, so as to render them insensible to the action of the cholera poison.

Patients Treated in the Second Stage.—Eight patients entered my service with the symptoms of the phlegmorrhagic period; one of the patients of the preceding series passed into this stage. All of these subjects were women of good constitution; the eldest was 42 years old. The duration of the disease preceding admission into the hospital varied; the *minimum* period between the appearance of diarrhœa and the commencement of treatment was one day, the *maximum* 27 days, and the *mean* 10 days.

The treatment consisted:

1. In the immediate administration of from 30 to 36 grains of powdered ipecacuanha, divided into 2 doses, which were taken with an interval of 15 minutes, the action of the emetic being facilitated by draughts of warm water. (The woman with cancer, who has been alluded to in a preceding paragraph, was not treated by emetics, and her case is not considered in the present category.)

2. Immediately after the cessation of the emesis excited by ipecacuanha, the patients commenced taking a potion containing 50 drops of the wine of opium, which was consumed in 12 hours, and followed by a potion containing containing 30 drops only, during the following 12 hours; or else, they took a solution of acetate of morphia, ½ a grain to 1 grain in the 24 hours. In one case, the dose was raised to 2 grains.

3. In the administration of four emollient lavements, ¼ of a pint each, with the addition of 10 to 15 drops of [Sydenham's] laudanum.

4. In the use of a ptisan, either of infusion of mint, of lemonade, or of currant syrup. Sometimes fragments of ice were allowed instead of the ptisan.

5. In the application of large sinapisms on the epigastric region twice daily, after the emetic, in 5 of the patients. In 2 others, a blister was applied in the same locality, a few days later.

6. Opiates were employed until the cessation of the choleric phenomena; the doses being gradually diminished.

The following were the results of this treatment:

1. In 7 patients, the vomiting was arrested definitively a few hours after the administration of the emetic. In the other 2 the vomiting continued two days, and was not checked until a second dose of ipecacuanha had been given. The patients did not appear to be fatigued by the operation of the emetic, and during their convalescence, there was no pain in the stomach, or appreciable gastric disorder.

2. The cerebral disturbances ceased permanently in 2 patients im-

mediately after emesis. In the 7 others, they continued on an average for 3 days; they were necessarily augmented by the opiates that were freely used.

3. The diarrhœa was permanently checked in 1 patient, immediately after the administration of the emetic; in 6 others, in 2 days on an average. In the ninth patient, the dose of ipecacuanha was repeated 3 times in the space of a fortnight. Each time the diarrhœa returned the countenance became altered, and the pulse small and frequent; all of the symptoms disappeared after the exhibition of the fourth dose of ipecacuanha. In 1 of the 6 patients, it was necessary to give a second emetic, on account of the persistence of the vomiting and diarrhœa; the vomiting ceased as soon as the medicine had operated. These last 2 patients experienced a sensation of constriction at the epigastrium, which was removed by vesication.

All of these patients were completely cured; none of them passed into the cold stage, and convalescence, that is to say, the period at which broth was allowed freely, was attained in four days, on an average, from the commencement of treatment. One patient alone, who is not comprised in this average, was not durably convalescent until the twenty-seventh day. The mean duration of the sojourn in hospital was 13 days.

The treatment instituted in this second period was more energetic than that of the first stage, for the disease was more intense, and there were new indications to fulfil.

I employed an emetic at the outset with the trifold intention of producing a salutary shock, of eliminating toxic matters, and of arresting the diarrhœa. I preferred ipecac to tartar emetic on account of the well-known property of the former of checking intestinal evacuation, whereas tartrate of antimony has the disadvantage of promoting it.

The ipecacuanha acted, as has been seen, heroically; it almost invariably suspended the nausea and vomiting, diminished the intensity of the cerebral disorder, and induced an amendment in the aspect of the countenance. It is certain that, in each case, the disease was modified favourably and very notably, on the very day of the administration of the emetic. I therefore recommend this agent as one of the most potent means that we can employ. I have not found that its use is followed by any inconvenience; one patient took it 4 times, and yet she had neither gastralgia, nor dyspepsia, nor any gastric irritation.

Opium was the indispensable adjuvant of the ipecac. I sought to render the nervous system insensible to the action of the cholera poison by stupefying it by means of somewhat large doses of laudanum or acetate of morphia.

I also derived signal benefit from topical stimulants at the epigastrium. Oppression in this region is a symptom which is extremely annoying to patients with cholera; it yields promptly, however, to the application of large sinapisms or blisters.

In this stage of cholera cool drinks and ice, are more acceptable than warm drinks.

By conducting the treatment with energy—by repeating the emetic as often as is requisite—by gradually increasing the doses of opium, my experience leads me to believe that we can control the symptoms of this second stage, and arrest cholera with as much certainty as in its first period.

If I am not deceived, this is an advance in therapeutics which we owe to the epidemic we have just passed through. The epidemic of 1849 taught us that we could master the first stage, the last one proves that we can also control the second stage. One step further and the Bréant legacy will be won,—not by me, however, at least this time; for, as I shall presently show, the *cold stage* has defied my efforts in this as in the preceding epidemics.

In the treatment of the first two stages of cholera, we have seen medicine stronger than the disease, quelling and arresting it, as quinine cuts short periodic fever. In the later stages the battle was harder, and the victory less decisive; medicine was still efficacious, though in a less marked degree; we had success, but it was more than balanced by our reverses.

In the division which I have laid down, the third stage is constituted by coldness, cyanosis, and feebleness or absence of the radial pulse, superadded to the phenomena of the phlegmorrhagic stage. Inasmuch as the symptoms of the patients treated in this period presented different degrees of gravity, I shall form two classes; the first comprising those cases in which the extremities were cold, while there was no very palpable cyanosis, and the pulse could still be felt; the second comprising those cases in which the whole surface was icy-cold, with aphonia and absence of any pulsation at the wrist.

First Category.—If we include the old woman with cancer, in whose case we were unable to institute any active treatment, there were 6 patients in this category. 4 of them were cachectic, the other 2 appeared to have good constitutions.

This was the treatment:

1. The application of warm linen cloths, and bottles of hot water, frictions with warm flannels, and, in 3 cases in which warmth was not restored by these means, frictions with ice, 3 or 4 times a day. The limbs were rubbed with a piece of ice for about 3 minutes; they were then carefully dried, and first rubbed and afterwards enveloped with warm flannels.

2. Ipecacuanha administered at the dose of 30 to 36 grains, as in the second stage. In one case, we had recourse a second time to ipecac.

3. A mucilaginous potion containing 50 to 60 drops of [Sydenham's] laudanum, or 3-5 or 5-6 grains of acetate of morphia, a twelfth part of which was administered every hour after the vomiting ceased. At night a similar potion was given with half the proportion of opium.

4. Emollient lavements as in the second stage.

5. Sinapisms on the epigastrium in every case, twice a day; in 2 cases large blisters on the same region.

6. Drinks—either tea, infusion of mint, lemonade, or else ice in in fragments, which was more grateful than warm beverages.

Opiates were continued as in the second stage until the symptoms ceased.

This was the result:

The coldness was permanently relieved in 2 cases by the end of 12 hours; in a third, by the end of 2 days; in the 3 other cases, it could only be relieved temporarily; we persevered in vain with frictions with ice and warm flannels, and gave punch and coffee and other stimulant drinks, in these 3 cases, but we only procured slight and momentary reaction. In 1 of the 3, we had recourse to a mustard bath, and immediately afterwards injected 24 ounces (750 gr.) of slightly saline water into the veins; all this induced only slight reaction.

Vomiting was arrested on the first day in 3 patients; on the second day in a fourth; in 2 others, who succumbed, it could not be checked. It was to these patients, particularly, who were tormented with nausea, albeit they could vomit no longer, that the free use of ice was allowed.

Hiccough ceased on the first or second day of the treatment.

Diarrhœa was arrested, in the 3 who recovered, in 2, 3 and 4 days; in those who died, it continued until the close.

The oppression at the epigastrium ceased after 2 days of treatment in 2 cases, 24 hours after the application of a blister; in a third case, it persisted for 5 days, although a blister was applied on the third day. This subject was a young girl who had long suffered from gastralgia.

In the 3 patients who survived, the cerebral symptoms had completely subsided by the end of the second day; they ceased on the fourth day in 2 of those who died.

There was gurgling on pressure in the patients who recovered until the fourth or fifth day. They were not allowed to take broth until the day following the disappearance of this symptom.

The sojourn in hospital was from 20 to 25 days.

I observed that, immediately after the action of the emetic, signs of reaction were manifested in every case, even in the cachectic subjects, in whom the amendment was only temporary. At the same time the nausea and vomiting was arrested, with nearly the same facility as in the second stage. I therefore consider ipecac one of our surest and most potent remedies in these cases, and advise practitioners to test its utility.

The effect of the emetic on the diarrhœa was less striking, and the addition of opium was required to check the discharges; nevertheless, I do not hesitate to say that at the very commencement of the cold stage, ipecacuanha is almost as effectual as in the phlegmorrhagic period.

I desire also to insist on the advantages of rubefacient and vesicating applications over the epigastrium. There are are two symptoms which especially torment patients with cholera: hiccough, and an epigastric oppression, a sort of cramp of the diaphragm and abdominal muscles. It is rarely that sinapisms and blisters, aided by cold drinks or ice, fail to make quick work with these distressing symptoms.

None of the patients, in this category, could tolerate warm drinks; even if they overcame their repugnance, and took a few swallows of some warm ptisan, it was instantly rejected. Cold acidulated beverages and ice were eagerly demanded, and produced unspeakable comfort.

The 3 patients who recovered had an easy convalescence; their appetite returned, and they took nourishment without difficulty. The fever ceased as promptly as the other morbid symptoms.

Second Category.—I now come to a class of cases in which the success achieved in other stages will be sought in vain; in addition to the extreme gravity of this advanced stage of cholera, we encountered, as in 1849, the unfavourable influence of sex on the mortality. In 1849, the mortality among the women was one-sixth greater at *La Charité* than among the men; the same proportion existed in the recent epidemic.

I have placed in this category 11 patients who entered my service in the *summum* of the algid stage,—with general coldness, well-marked cyanosis, complete aphonia, pulselessness, and loss of elasticity in the skin.

Of these, 3 were aged females, who had laboured hard and were well-nigh worn out; 4 were young mothers, who had been delivered within a fortnight, and had been taken with choleriform diarrhœa either at the *Maternité* or the *Hôpital des Cliniques;* one was a young girl, frail and delicate, who had nursed a sister till her death by cholera, and was exhausted by fatigue and privations; the 3 others were apparently of good constitution.

The length of time which had elapsed since the invasion of the disease in these 11 patients varied; 5 had been sick a day only, and in 24 hours had reached the extreme algid stage; all of them had been in the cold stage at least 12 hours; 3 for more than 24 hours.

The treatment was as follows:

1. As soon as they arrived, the patients were placed in warmed beds, enveloped in heated cloths, and surrounded by bottles of hot water. 9 were rubbed with ice 6 or 8 times a day, in the manner already described; 2 were so profoundly comatose that it was feared they would not react and this remedy was not employed. The frictions with ice were used until the patients became quite warm; in one case they were persevered in for 4 days.

2. As soon as any warmth was manifested, we administered an emetic; 7 patients only took this remedy; 4 appeared incapable of bearing it; in 5 cases it was administered on the first day, in 2 on the second day; thrice we were compelled to have recourse to it a second time, on account of the persistence either of the nausea or diarrhœa.

3. When the vomiting ceased, we prescribed a two-ounce mucilaginous potion, containing 50 drops of the wine of opium, which was given at intervals for 12 hours, and followed by a potion containing 30 drops of the opiate. We administered the same lavements as in the preceding stages. 3 patients, in profound coma, took no opium.

4. On the second day, usually, we applied a large blister over the epigastrium, when the sinapisms, which were applied in every case, failed to relieve the oppression. In one case, which terminated fatally on the second day, we blistered the legs.

5. Mint-water, punch, coffee, or wine and water, were allowed as drinks. When reaction was established, we gave either iced lemonade, solution of syrup of currants, or fragments of ice mingled with the juice of an orange. The ice, thus acidulated, was generally preferred.

6. Lastly, in extreme cases, when we were unable to procure reaction, and every means had failed, we practiced injections of salt water into the veins, a method advocated by some English and American physicians. I had essayed this treatment in one case with partial success in 1849.[‖]

I employed venous injections in 4 cases, on subjects in whom there was a complete absence of heat, and aphonia and pulselessness, in a word, on patients who were moribund.[¶]

These were the results of this treatment:

Three patients recovered; 8 succumbed without reacting completely, and in 2 days on an average after their entrance; 1 died in 4 hours after her admission; this was the young girl, of whom I have spoken. Another patient, aged and worn out, who had been 12 hours in the cold stage, was brought to me almost moribund. I injected on the spot a pint of the saline solution. Immediately afterwards, the pulse returned at the wrist, the voice became audible, the countenance brightened up, the cyanosis disappeared, the limbs became warm. The patient

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[‖] See my *Traité analytique et Pratique du Cholera-morbus*, p. 570.

[¶] I adopted the following manual procedure:

A weak saline solution, 2½ drachms (10 gr.) of chloride of sodium dissolved in a pint of water, was kept at the temperature of 97° F. (35° C.) on a water-bath. The arm being tied up as if for venesection, the skin is incised with a bistoury and the median cephalic vein laid bare; a fine exploring trocart is then introduced from below upwards into the calibre of the vein. The withdrawal of the stylet is followed by the escape of a few drops of blood; the operator then places his finger on the orifice of the canula; an assistant removes the bandage from the arm; a second assistant charges a syringe, which should hold at least half a pint. The syringe being adjusted to the canula, the injection is made gradually; then the syringe is re-charged, and the injection is repeated. This step in the operation is very delicate; the vein is small and very friable; unless the canula is held carefully, its coats will be perforated.

In 2 cases, I injected a pint of liquid, and in 2 others a pint and a half.—AUTHOR'S NOTE.

was cheerful, believed herself snatched from the jaws of death, and asked for another injection. The amelioration lasted 20 hours, and then the phenomena of the algid stage returned. We made a second injection, and the result was so satisfactory, that we hoped to save the patient. At the end of 12 hours, however, collapse recurred, and proved mortal in 5 hours. In the other cases, the immediate benefit produced by injections was equally striking, but it was only temporary; they sank into collapse in 6 or 9 hours.*

In the three patients who recovered, the coldness passed off quite rapidly in 12, 24, and 96 hours; but it was not until the end of a week that the skin recovered its elasticity. The urine reappeared in 4 days; it was albuminous in 2, jaundiced in the third, patient. The diarrhœa lasted from 7 to 10 days.

Thus, of 11 patients in the extreme cold stage, we saved only 3; a small proportion certainly, which is partly explicable by the previous state of health of the patients, and which proves that these extreme cases are as refractory as they were in 1832. It is on this extreme stage, therefore, that our investigations should hereafter be directed.

I earnestly anticipate the discovery of more efficient remedial agents, but I believe that the remedies which we employed are the best which we have any knowledge of at present.

Frictions with ice or snow constitute the best mode of restoring warmth of surface. Very few cases were insensible to the action of this remedy.

The emetic by no means obtains the same success in this as in the other stages. Nevertheless, each of the 3 patients who recovered took ipecac twice, and in each case its administration was followed by a diminution in the vomiting, and an evident reaction. In the cases in which it failed, there was only momentary reaction; still, its use did not appear to increase the prostration.

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* It was curious to note at the autopsy the effects of the injection. In the first patient both injections were made by the same vein, and with the greater difficulty because it was the first time that I had performed the operation. The median cephalic vein contained a reddish clot; its walls were injected, and had lost their polish; this appearance existed for an inch and a half beyond the puncture; the cephalic vein, the axillary, subclavian, and superior cava were perfectly healthy. Perhaps the circumscribed phlebitis in this case was due, not to the injection, but to the fact that the platina canula which I used was heated, so that it produced almost a burning sensation on my fingers, as well as on the patient's arm. In the other cases the veins were healthy. [*Author's note.*

In obedience to the pressing indication to excite the vital powers, we used punch, wine, and coffee, which were at first agreeable, but afterwards repulsive to the patients. I never used stimulating drugs, as they only aggravated the nausea.

In order to render the nervous system insensible to the action of the cholera poison, we continued the use of opiates until reaction was established, if it was possible to do so. When profound stupor forbade the use of narcotics, we gave alum in potion and enema.

The blister to the epigastrium was of evident utility. Whatever was the issue of the disease, the epigastric distress was relieved by it.

Lastly, I recommend cold drinks and ice, as the best means of relieving the nausea, vomiting and hiccough.

It remains for me to speak of the injection of water into the veins; I dwell on this remedy because I think its utility has not yet been fairly tested.

It is evident to all those who have observed the cold stages of cholera, or have examined subjects who had died in it, that there is a kind of asphyxia attending it. The blood loses a part of its water,* and becomes of the consistence of jelly. It is absolutely necessary to restore its fluidity; this may be done either by bloodletting or by introducing water by the veins.

Bloodletting has been advised by some physicians, but I think that I finally determined its value in 1849. It is rarely possible to take more than seven ounces of blood, and even this quantity is procured slowly, and by opening several veins. Now what is six or seven ounces of blood? the economy scarcely feels its loss. As respects the liquefaction of the blood, then, the influence of venesection is absolutely null.

Venous injections are not liable to the same reproach. When you inject a pint of water into a vein, you may be almost certain that the blood in the right side of the heart is fluid, and that in passing through the lungs it preserves this fluidity, and can traverse the pulmonary veins without producing asphyxia and consequent algidity.

I know that this is only palliative; but I think we thus attend to the most urgent symptom, and it is something certainly to gain a respite, and restore for a time the pulse, heat, voice and strength. I believe that if we injected a much greater quantity of liquid than I used, we might have more durable results. I base this opinion on the prolonged amelioration which was produced in the patient on whom I practiced two injections. I propose then to inject a quart of water the first time, and to repeat the injection as often as algidity returns.

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* See the analyses of the blood made in 1849 by MM. Briquet and Mignot.

I had not an opportunity of carrying out my researches on venous injections. I trust that physicians will use this last resource when other means have failed; and I hope that they will have better fortune than I had, for I believe that the introduction of water into the veins is the remedy for the cold stage of cholera, as opium and ipecac are the remedies of the earlier stages.

Patients who arrived at La Charité in the stage of reaction.—I have little to say of these patients. I had only two: one was an old, decrepid woman, the other a woman of 40 years, who having had cholera in 1832 and 1849, was now recovering from a third attack.

These two patients recovered.

We may add to these the 6 women I succeeded in bringing out of the cold stage, and we have a category of 8 patients, none of whom suffered from those serious disorders which often complicate this period. I had chiefly to combat relapses of the choleric diarrhœa and nausea; the former was checked by opium combined with alum, the latter by cold acidulated drinks, and blisters to the epigastrium dressed with a salt of morphia. In one case, it was necessary to use a cataplasm of ice over the stomach.

Such was the treatment I employed. It was very simple, by no means *recherché*. I endeavored to meet the indications vigorously and perseveringly, and I do not think that I can complain of the result. I am far from finding fault with those who employ far-fetched or extraordinary remedies, and would not, for the world, condemn experiments which may lead to useful discoveries; but the experience which I acquired in the two former epidemics has made me very skeptical as to the success of such means, and has contributed to produce my preference for those remedies which have a comprehensible object, in place of those empirical methods which emanate from inspiration or theoretical ideas.

ART. II.—*A Case of Spontaneous Discharge of a Urinary Calculus through a Fistulous Opening into the Vagina.* By JOSEPH W. SMITH, M. D., Petersburg, Virginia.

As calculus is of somewhat rare occurrence in females, I take pleasure in reporting the following case, where a nucleated calculus of immense size, passed by ulceration through the walls of the bladder and vagina, and was expelled "per vaginam," producing *vesico-vaginal fistula,* which may be of some interest to the readers of your journal.

The case alluded to occurred in the person of a negro woman, who is about forty-five years of age. Her first symptoms appeared about twelve years ago, and were, retention of urine, and pain, and other indications of some disease of the bladder.

The bladder was once or twice relieved of its surcharge, by the introduction of the catheter, after which time urination gave but little trouble. She became much emaciated and her general health very bad, no effort having been made to remove the offending cause, as it had not been discovered. Thus her case remained until about two years ago, when I was first called to see her; at which time she was taken with incontinence of urine and pain in the neighbourhood of the neck of the bladder. From the vagina, there was a discharge of pus and sanies. The urine would pass away in greater quantity at some times than at others. A few days after this, she was at stool, when she discovered something to fall with great force in the vessel, which attracted her attention, and on examination was discovered to be an immense calculus!

The calculus was ovoidal in shape, its long diameter measuring three inches, and its short diameter more than two inches; its weight (apoth.) being seven hundred grains. On analysis, it was found to be a fusible calculus composed of organic matter, with phosphate of lime, uric acid, and a little ammonia. On dividing the calculus longitudinally, there was found in its center a small cavity, in which was discovered a nucleus. That being examined, under the microscope of Prof. Leidy, of the University of Pennsylvania, was proven to be a fragment of a leaf of a plant, without the slightest doubt. As the cell structure was well preserved, and in the cuticle, the respiratory stomata were distinctly visible, it is probable the leaf may have been detached from a twig introduced by the urethra in the act of titillation.

A few days after the expulsion of the calculus, "per vaginam," a minute vaginal examination was made. A catheter was passed up the urethra into the bladder, and by introducing the index finger high up into the vagina, it was found to pass into the bladder by the side of the catheter for some distance through the ulcerated opening, the edges of which were very rough and indurated, and were about one inch from the meatus urinarius, and circular in shape. In about thirty days after this period, another examination was made which confirmed the former and the fistulous opening was found to have contracted to the size of the end of the index finger. The pain and uneasy sensation in the surrounding parts having subsided, her general health has very much improved, and although the fistulous orifice still exists, it may be considered within the pale of a successful operation for *vesico-vaginal fistula.*

I think this case a very practical illustration of the great recuperative and conservative powers of nature, resisting for years the extensive irritation and inflammation which constantly affected so sensitive and sympathetic a part.

The expulsion of the calculus was one of those feats, which the "vis medicatrix" consummates, when science fails to perform her duty.*

ART. III.—*On Nasal Irritations in the Treatment of Ozæna.* By M. MAISONNEUVE, Hopital Cochin, Paris.

All physiologists are aware that, in the act of deglutition, the pharynx and soft palate close the communication of the fauces with the nasal fossæ, by a combined movement, so as to prevent the alimentary bolus from regurgitating into the nostrils; but no one, so far as I know, has yet mentioned the production of this same phenomenon under the influence of injections of liquids by the anterior nares, nor remarked that injections propelled violently into one nostril invariably escaped by the other, without penetrating into the throat.

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* A most remarkable case of spontaneous discharge of a calculus from the female bladder is recorded by Mr. Molyneux in the *Philosophical Transactions.* A woman voided a stone *through the urethra,* which measured in its largest direction seven inches and six-tenths, and at its thickest point, five and three-quarter inches, its weight being two ounces and a half. Middleton also tells of a case ln which a stone weighing four ounces was expelled in a fit of coughing, after being lodged in the passage a week.—ED.

This fact, to which I now desire to call the attention of surgeons, appears to me to be of considerable importance in the treatment of several serious diseases, and especially in ozæna.

Ozæna,[*] as every one knows, is an infirmity consisting in an excessive fœtidity of the nasal secretions, depending on the protracted sojourn of blood, pus, and mucosities, in the recesses of irregular cavities, where they are subjected to the triple action of air, heat and moisture.

At each expiration, the air which traverses these cavities, is charged with putrid emanations, and forms a loathsome atmosphere around the patient; so that the victims of this disease become objects of horror and aversion.

Hitherto, our art has possessed only feeble resources against this appalling disorder. With the exception of syphilitic ozæna, in which the preparations of mercury and iodine have a direct action, the graver varieties of the disease have been regarded as nearly incurable. Cauterizations, insufflations of detersive and astringent powders, were employed, indeed; patients were advised to inspire balsamic and emollient liquids, and timid injections were made with small syringes, but these remedies were but insufficient applications, and persons who used them, still exhaled the repulsive odour characteristic of the disease.

No one thought of using free and powerful injections, under the persuasion that they would penetrate into the throat.

Now numerous experiments have demonstrated to me positively that this opinion is completely erroneous, and that injections propelled with great force into one nostril, will always escape by the other.

It results from this fact, that we can readily wash out the nares, and free them from the accumulated crusts, mucous, and pus, which by their sojourn produce ozæna.

Nothing can be simpler than this operation. It suffices to introduce the canula of a large syringe into one nostril, and to push the piston energetically. A current is presently established, and foreign matters are washed away. The operation is not disagreeable, and may be executed by the patient himself.

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[*] *Ozæna,* ἡ ὄζαινα; ulceration of the mucous membrane of the nasal fossæ, producing fetidity of the air expired by the nostrils,—*das stinkende Nasengeschuür,* (Palmer.)—Ed.

Thus discharges are removed, the fœtor is corrected, and in a short time the morbid condition of the mucous membrane begins to amend, and a durable cure is ultimately effected.

ART. IV.—*Table of Cholera Cases Treated in the Virginia Penitentiary During the Epidemic of* 1849. By J. N. BROOCKS, M. D., Richmond, Virginia.

In the September number of the Virginia Medical and Surgical Journal, I gave my treatment of cholera in the epidemic of 1849.

The following table exhibits the results of that treatment in the Virginia Penitentiary, taken from my weekly reports (handed to me a few days since by the Clerk) to the Board of Directors, as the Surgeon of the Institution at that time. Other cases were treated in the cells not admitted into the Hospital, for want of room. The number is not stated in the reports.

Table Showing the Number of Cases of Cholera, their Different Stages, the Time of Admission into the Hospital, the Recoveries and Deaths.

Time of Admission.	No. admitted.	Choleraic Diarrhea.	Confirmed Cholera	Collapsed Cholera.	Recov'd.	Died.
From 1st to 7th June, 1849,	8	8	-	-	8	
" 14th "	13	13	-	-	13	
" 21st "	7	7	-	-	7	
" 28th "	16	14	2	-	16	
" 5th July,	45	43	2	-	45	
" 12th "	25	25	-	-	25	
" 19th "	14	13	-	1	13	1
" 26th "	11	9	2	-	11	
" 2nd Aug.	18	18	-	-	18	
" 9th "	12	9	3	-	12	
	169	159	9	1	168	1

LECTURES.

I. *Lectures on Fever.* By **William Stokes**, M. D., Regius Professor of Physic in the University of Dublin.

Lecture VII.

Let us now examine more closely some of the local or secondary diseases occurring in fever. In their seat, if not in their nature, these affections are observed to vary in different countries. On the continent—at least in France, and in a large portion of Germany—the frequency, and, probably, the preponderance of the secondary disease of the intestines, is a matter that must be admitted. So remarkable, indeed, is the predominance of the tumefaction and ulceration of the mucous glands of the intestine in France, that Andral, in the first edition of the "Clinique Médicale," described fevers under the general head of diseases of the digestive system; and yet Andral was no blind follower of Broussais. In Ireland, however, we do not find this remarkable preponderance of the secondary diseases of the digestive system; but, when I state this to you, I wish you to understand and adopt this principle, that all statements as to the anatomical characters of fever, as it prevails here or elsewhere, are to be accepted only so far as they apply to the prevailing epidemic. And, although it is true, that, on comparing our typhus with the French typhoid fever, this difference becomes apparent, that the existence of follicular disease of the intestine is almost the rule, and its absence the exception in the latter affection, while in the Irish typhus, this condition of the intestine is rare, you must, however, bear in mind, that in Ireland, and in our own time, we have had a great epidemic of what was certainly typhus fever, in which the condition of the intestine accurately represented that which is found to prevail on the continent. This is an important fact, and one which some of the continental writers on pathology do not seem to be aware of, or they would not be so apt to adopt artificial distinctions and erroneous opinions on the matter. In the epidemic of the years 1826, 1827, and part of 1828, disease of the mucous glands of the intestine was so frequent that its existence might be held to be the rule, and its absence the exception; and it is also true that intestinal ulcerations have been repeatedly observed in the maculated typhus of Ireland, their amount and frequency varying with the epidemic influence. Let me refer you, for proof of these statements, to Dr. Cheyne's papers in the first and second volumes of the "Dublin Hospital Reports." Similar observations have been made elsewhere also. What, then, shall we say of that doctrine which declares that there is an essential distinction or difference marked by pathologico-anatomical characters between the continental fever and our typhus, or between the continued fever of Great Britain and fever as we have it in this country?—a difference to be expressed anatomically in this way, that in the continental or in the British continued fever there is extensive ulceration of the intestine, while, in the Irish fever, this condition is wanting. Dr. Lombard, of Geneva, whose experience of fever in this country was manifestly insufficient to justify his coming to any decided opinion on the subject, holds that we have in Great Britain and Ireland two different fevers, one highly contagious, which he calls the Irish typhus, and in which the cephalic symptoms predominate to the exclusion of abdominal alterations; the other sporadic, and most likely not so infectious, in which the abdominal symptoms are more predominant, so much so that the follicular disease and consequent ulceration are always present. These two fevers are, in the opinion of this writer, to be found in most parts of Great Britain, but the first is most prevalent in Ireland, and in parts where the Irish come in great numbers; the other, similar to the European sporadic fever, is met with in all places, varies with the seasons, and is not necessarily produced by, or under the influence of, a contagious principle. Had Dr. Lombard been aware that ulcerations of the intestine are frequently met with in our petechial typhus; and again, that the typhoid fever, or at least a fever with extensive dothinenteritis, has raged epidemically for two years in this country, he would have been slow in venturing to settle the question in so decided a manner; and I have before mentioned to you, that during the prevalence of any particular epidemic in this country, we meet with cases agreeing in all their general characteristics, and having all the distinctive marks of typhus; in one set of which follicular ulceration is met with, while in another this lesion is entirely absent.

If, however, we inquire, what is the disease secondary to typhus, for the removal or modification of which we are most often called on to exert our skill in the wards of a Fever Hospital, and especially in the worst cases of petechial typhus, I would say that it is the pulmonary, rather than the gastro-intestinal complications. Certainly the secondary disease of the bronchial surface is generally the most formidable of the local affections in our Irish typhus. This is true, at least for cases which have occurred within the last ten or fifteen years. So great, indeed, is the frequency of this bronchial complication, that long before I was aware of the opinions of Rokitansky on this point, I frequently suggested in my lectures, whether the secondary bronchial disease might not be held to stand in the same relation to the Irish typhus that the follicular disease of the intestines in France bears to the fever in that country. Let me read to you a passage from Rokitansky's work, lately translated by Dr. Day for the Sydenham Society, bearing on the points before us. He is speaking of the typhus process on the mucous membrane of the air passages:—"In primary broncho-typhus the general disease originally localises itself here, avoiding all other mucous membranes, even that of the intestine, for which in general the typhus process shows the most decided preference. The latter mucous membrane exhibits, however, in many cases a recognisable, though always subordinate and secondary development of the follicles, in which the adjacent mesenteric glands participate; and, in such cases, it is very often a difficult matter to distinguish the typhus in the above-named affection of the bronchial mucous membrane. The peculiar stasis of the spleen and of the great *cul de sac* of the stomach, the remarkable intumescence of the former, and the singular character of the blood, the typhus nature of the general disease, and especially the altered condition of the bronchial glands invariably serve, together with other symptoms, to indicate the typhus nature of the bronchial affection. The alteration occurring in the bronchial glands is of the same character as that affecting the mesenteric glands in abdominal typhus. They become swollen to the size of a pigeon's, or even of a hen's egg, are of a dark violet colour, which afterwards becomes lighter, present a relaxed and friable appearance, and are infiltrated with a medullary typhus matter. Like typhus mesenteric glands, they may become the seat of a tumultuous metamorphosis, and thus either with or without perforation of the adjacent mediastinum, may give rise to pleurisy. This form is often combined with pneumo-typhus and typhus pleurisy, and is, beyond all doubt, the basis of the spotted contagious typhus, and very probably also of the Irish and North American typhus, which, in the majority of cases, run their course without any intestinal affection. With us this affection is rare, and, in point of frequency, is not to be compared with abdominal typhus."

I may observe here, that by the term "tumultuous metamorphosis" is implied the occurrence of violent symptoms with suddenness and rapidity of progress. Dr. Day remarks, that Rokitansky has used the term in a new sense, but it means generally, as I understand it, that a violent and re-active inflammation occurs in the parts altered by the typhus process, which may cause great congestion, turgescence, perforation, or even gangrene. As Rokitansky does not indicate any distinctive features between the spotted contagious typhus and the Irish and North American typhus, we may safely hold them to be the same diseases.

With respect to the question of the comparative frequency and importance of the pulmonary as contrasted with the nervous symptoms in fever, as it affects the lower and upper classes in this country, my decided impression is, that taking the experience of the last twenty-five years, the secondary bronchial, or, to speak more generally, the pulmonary complications are much more frequent and dangerous in hospital than in private practice. It is not easy to explain why this should be so, but certainly we find a greater preponderance of nervous symptoms in the typhus fever, as it affects the upper classes of society, than in cases of the disease as we meet with it in hospital; while in hospital practice the nervous symptoms, though we cannot say that they are absent, seldom require any very special interference on the part of the practitioner. No doubt we meet with coma and subsultus tendinum occasionally, but that predominance of nervous symptoms in the early periods of typhus, which is so common in the upper classes of society, is but rarely seen in our wards; and if you will only reflect on the simple fact, that we so rarely have occasion to shave the head among our hospital patients, you will fully see the truth of what we say. Remember, too, how many cases we have had, in which, while all the symptoms of typhus—such as prostration, weakness of the heart, eruptions of maculæ and petechiæ, and well marked secondary diseases of the mucous membrane of the intestines—were present, while the patients' minds remained quite unclouded, and while no symptom occurred calling for any special measures directed to the head. The typhus of Ireland, then, is not characterized, as Dr. Lombard has described it, by a preponderance of cephalic symptoms, at least when it occurs in that class from which he supposes the best specimens of the disease to be drawn. He is as incorrect in his statements about the predominance of cephalic symptoms as when he says that the absence of follicular ulcerations of the intestines is a distinctive mark of Irish typhus.

In the typhus fever of the upper classes in this country the nervous symptoms are generally much more aggravated and developed at an earlier period; and it may be that this preponderance of the nervous symptoms, this tendency to affections of the brain in one class, even though these affections be principally neurotic, is a cause of the comparative exemption of such cases from the secondary bronchial disease. You will find as you advance in the study of general pathology, plenty of examples in which diseases of structure or of deposition are suspended or replaced by purely nervous affections. Explain it as we will, the general proposition appears true, that the nervous symptoms, comparatively speaking, are but slightly developed in the fever of the lower classes, while those indicative of nervous disease are much more prominent; and conversely that in the upper ranks symptoms indicative of irritation of the mucous surfaces are less developed, while the nervous symptoms are severe; and this, perhaps, may throw some light upon the doctrine which has been long held by many, that the mortality of fever is greater in proportion as we ascend in the scale of society.

I have already told you that, as regards prognosis, the preponderance of the nervous symptoms in fever should cause us more apprehension than that of any other class of symptoms, and especially when this preponderance is observed at an early period of the disease. This greater susceptibility of the nervous system in the higher classes may itself be a cause why we cannot use wine with as great liberality in this class as with ordinary hospital patients. And this, again, may explain the greater fatality in private practice, inasmuch as that, in consequence of the excitement of the nervous system and the incapability of the patients to bear stimulants largely, we are debarred from the use of that which is the great medicine for fever.

I think we may lay it down as a principle, that the more the secondary affections of fever are anatomical, the greater will be the utility of stimulants; and conversely the more they are neurotic, and especially in cases where these neurotic symptoms are more closely related to the cerebro-spinal centres, the less will be the efficacy of wine. It might be supposed, from *à priori* considerations, that the man in the higher classes of life who has been accustomed to the use of wine, would require it more and derive greater benefit from it in the course of a fever which it must be remembered is a disease of debility and prostration, than the peasant who has not been habituated to the regular use of stimuli; but I believe that the very reverse is the fact, and that the greatest triumphs of the stimulant treatment in fever are to be found when it affects the agricultural peasant whose nervous system has not been excited either by the use of stimulants or by intellectual exertion. I know that some will object to this on the ground that our Irish peasantry are habitually intemperate; but this charge of intemperance is only one of the many calumnies that have been put forth with reference to our countrymen.

The Irish peasant is not habitually intemperate; neither do his means permit nor his inclinations direct him to be so. When he does indulge, it is on special occasions; but you seldom meet in hospital a case of injury to the general health produced by a long course of intemperance in the agricultural peasant. The case is no doubt different in the class of artisans who are the inhabitants of our large cities and towns. In this class we find, that when fever attacks an individual we can neither use stimulants with the same boldness, nor reckon on their success with the same confidence as in the more sober portions of the population. In this respect the Irish are not peculiar.

To a person who is not in the habit of examining patients very closely, the frequency and importance of the bronchial disease would not appear very evident or striking as he walked round the wards of an Irish Fever Hospital. We find the patient lying in bed; he is, perhaps, in a state of stupor, but from this he is easily roused. He is covered with petechial spots, red or livid, as the case may be. There is nothing remarkable about his breathing; he is not reported to have any cough; his pulse is probably 120, or between 120 and 130, and his heart is weak. That patient, with but little hurry of breathing, not complaining of any distress, and without cough, may be, and frequently is, at that very time, almost in a very advanced stage of the bronchial disease. When you apply the stethoscope, you are surprised at the great amount of disease that it reveals, although the symptoms of this important affection are absent. One would expect, that in such a case there would at all events be lividity of the countenance from the nonarterialization of the blood; but here is one of the curious things connected with fever which it is extremely difficult to explain—that you will often see but little lividity in such cases. At all events, it is not sufficient to draw the attention of the uninformed Practitioner to the condition of the patient's lung. In most patients labouring under bad typhus there is a peculiar dusky hue of the face; and this he would have whether the bronchial disease were present or not. But I have over and over again seen the most extensive bronchial disease, where every tube seemed to be half-filled, and yet little of the kind of lividity which we see in a case of asthma or if bad suffocative catarrh existed. Consider this fact for a moment, for it is full of matter for reflection. What does it tell you? It announces to you this highly-important principle, that in their formation, and in their progress, the secondary diseases of fever are, as it were, silent. They occur without the usual symptoms which are observed in idiopathic inflammations. They are not idiopathic inflammations, and, therefore, they have not the symptoms of them. Let us omit no opportunity of impressing this on our minds, that these diseases are not inflammations. They form silently—they advance silently. Consider for a moment the formation of a pustule in an ordinary case of small-pox. The pustule gives no notice of its formation. You turn down the clothes, and you find the arm covered with vesicles; the patient has not complained, but you find there is the disease. So it is with respect to the bronchial disease in typhus; so it is with respect to the intestinal disease in typhus. We see the bronchial disease forming in this singular and latent manner, without excitement or suffering of the patient. We see the same in the intestine; we see the same in the heart. The softening of the heart, as you will have abundant opportunities of seeing this season, is, in its commencement and all through, a silent process. The process of change up to its maximum alteration, and the process of retrocession up to the period of recovery, considered simply, when they are not interfered with by accidental irritative inflammation, go on silently. The disease may proceed to its maximum without symptoms, and retrocede without symptoms. Now, under these circumstances, I have told you, that, when you apply the stethoscope, you find singularly extensive râles. These râles may be sonorous, mucous, or crepitating; the amount of each of these characteristics varying in every case, and in different portions of the lung, in the same individual. When you use percussion, you find that there is no remarkable dullness anywhere. I have not observed, at least in the bronchial affections of typhus fever, the curious result of percussion which we see in other cases of bronchial disease. We have not observed any increase of sonoriety of the chest. This is a very remarkable fact. In a large number of cases of acute inflammatory bronchitis, you observe, that, so far from the chest being dull, it is actually clearer than natural; and this is explained by the circumstance, that there is a great accumulation of air in the air-cells of the lung,—that, in fact, every little air-cell of the lung is in a condition of extreme distension; it is full of air, and this air cannot find a ready egress during expiration, in consequence of the state of the bronchial tubes; and hence we have the increase of sonoriety. I have not observed this in cases of typhus fever where there was no consolidation of the lung; but, at the same time, it is to be noted, that we have not specially studied this point in fever cases. When the patient draws a deep breath, we frequently find that the râles go on increasing up to the very end of the inspiratory act; and, in certain cases, the following curious circumstance is found,—and it is one of those which illustrate what I have termed the silent action of the disease—that on applying the stethoscope you will find perhaps but little râle, or a loose rattle in the larger tubes, or perhaps in some of the secondary bronchial tubes, —that is during ordinary breathing. If you contented yourself with such an examination, you might come to the conclusion that there was very little the matter with the patient's lung—slight mucous disease in the lower part of the trachea, or in the very large tubes. But you may be altogether wrong; for, under these circumstances, it frequently happens, that when the patient draws a deep breath, you are startled with the extent and intensity of the râles running to the very end of the respiratory act. It is in this condition that the patient's life is seriously endangered; for if this bronchial disease does not retrocede, but continues to advance, it may happen that the patient will suddenly fall into a condition of asphyxia, tracheal rattle comes on, and he dies a mechanical death—in fact, he dies suffocated. You may leave your patient apparently going on very well, and be summoned to him in the course of a few hours, and find him *in articulo mortis.* This is a common thing, as I mentioned to you before, in patients in whom the bronchial disease has been overlooked or neglected.

II.—*Course of Lectures on Hernia.* By Professor MALGAIGNE.

LECTURE IV.*

In the last lecture, we studied the mode of development of inguinal hernia, and found that this process might be divided into four periods: 1. *The point*, in which the hernia simply forces the peritonæum through the internal ring; 2. *Interstitial hernia*, contained in the inguinal canal; 3. *Bubonocele;* and 4. *Oscheocele*,† or scrotal hernia.

We then considered the diagnostic signs of these different degrees of hernia, and subsequently passed to an examination of the influence of unreduced hernia on the neighbouring tissues; we shall now study the effects of unreduced hernia on digestion, and on the tissues composing the hernia itself and its sac.

1. *Influence of Unretained Hernia on Digestion.*—As soon as a visceral protrusion engages in the inguinal canal, the majority of patients experience a sensation of weakness in the abdominal walls. Oftentimes the existence of hernia is not suspected, and a bandage is placed around the belly, which by forcing the viscera downwards only increases the difficulty.

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* See *ante*—Vol. III., No. i., p. 39; No. iii., p. 229; and No. iv., p. 334.

† From *κήλη, tumor; ὄσχη, scrotum.* The word *κήλη* is much used in the older surgical terminology; ex. gr. *epiplocele, ἐπίπλοον, omentum; enterocele, ἔντερον, intestinum; bubonocele, βουβὼν, bubo,* the groin; *hydrocele,* a tumour containing water; *varicocele, hæmatocele,* etc.—NOTE BY THE TRANSLATOR.

When an hernia issues from the external ring, it generally causes certain pains and sensations of uneasiness which it is important to notice. In some cases, it is true, no inconvenience is felt except from the weight and size of the tumour. I have seen hernias as large as my hat, which caused no more discomfort, than an adipose scrotal tumour. But, as a general rule, an individual with an unretained hernia suffers from local pain and a general malaise, particularly during damp weather; for an hernia is as true a barometer as an old soldier's wounds. I may here mention incidentally, that if a truss supports a protrusion in damp weather, it will assuredly maintain it still better in dry weather. The contents of an hernial sac are augmented in volume when the atmosphere is moist, and I believe that strangulation is more common during such seasons. As to the nature of the pain in hernial tumours, it varies. It is sometimes a dull pain, sometimes a colic extending over the whole abdomen, and accompanied by eructations, meteorism, and difficulties in digestion. I would call your attention to this last point particularly, for an interesting practical observation depends on it. A great number of middle-aged men complain of difficulties of digestion, to which they are peculiarly liable after eating certain kinds of food. Physicians treat these cases as gastralgia, without success, oftentimes; but the surgeon examines the groin, and frequently detects an incipient hernia, which is the cause of the disorder. I have been fortunate enough to relieve a great many such cases by the simple application of a pad. Even if you cannot detect an *hernial point* (and in corpulent individuals they are detected with difficulty), you will do well to apply a truss whenever you find a dull pain in the groin coinciding with difficulties in digestion. I formerly distrusted myself, and thought the application of a truss unnecessary when I could not make out a protrusion, but now I feel confident of the propriety of the treatment which I recommend.

Certain articles of diet influence the disorders produced by unretained hernia. Beans, cabbages, and some farinaceous articles, everything, in fact, which causes an abundant liberation of gas in the bowels, augments the difficulties of digestion excited by hernia.

I have remarked that after the age of 70, hernia becomes less frequent. This reduction in the proportion of persons affected with hernia depends on the fact that the mortality of such subjects exceeds that of the general population. This mortality is not the result of strangulation alone, or even mainly; it depends on the fact that the victims of hernia grow older faster than other men, and offer less resistance to the influence of deleterious agents. M. Hutin, Chief Surgeon at the *Invalides*, has made an estimate which seems to refute this assertion. He attempts to prove that the mortality among persons exempt from hernia is twice as great as it is among persons labouring under this infirmity, and also that diseases of the digestive organs are not more common in this class than in others. This calculation shows how difficult it is to draw up trustworthy statistics. The population at the *Invalides* is composed of broken-down soldiers, of men mutilated or diseased by the accidents of war; paralysis is common there, and pulmonary catarrh, and vesical catarrh, so fatal to the aged, is very common. Hernia, therefore, is a slight disease at the *Invalides*, and those affected with it are usually better off than their neighbours.

Hernia rarely occasions nausea and vomiting; these are among its rarest phenomena, when not complicated with strangulation.

We come now to speak of the influence of hernias on the viscera of which they are constituted, a question interesting in a surgical point of view. In regard to the *omentum*, we may say that it is rare to meet with an epiplocele in which the omentum has not contracted some adhesions. The omentum becomes loaded with fat, and occasionally thickened. The adhesions are of different kinds; one of the most interesting varieties is that in which the omentum adheres to the neck of the sac; an intestine may then become strangulated between the omentum and the neck of the sac.

The intestine rarely contracts adhesions with the sac; the large intestine presents this lesion oftener than the small, owing to the fatty fringes with which it is garnished.

Sometimes a greyish circle indicates where the intestine has undergone constriction. In some cases, the calibre of the bowel is diminished by this compression, and a stricture is formed. Ritsch relates a case, in *Les Memoires de l'Académie de Chirurgie*, (Vol. iv. p. 174), in which the ileum was constricted as if it had been tightly tied with a string. The intestine was entirely obliterated.

The sac occasionally contains only a portion of the circumference of the intestine. A portion of the bowel descends like a glove-finger, and forms a diverticulum. [*Hernia litrica.*—TRANS.]

The viscera in escaping from the abdomen push the peritonæum before them; the question arises whether the serous membrane is stretched in order to cover the contents of the hernia, or whether it is dragged from the neighboring parts. It is stretched in umbilical hernia, but in inguinal hernia it is usually displaced, as is shown by the folds which are formed at the neck of the sac. Undoubtedly, the peritonæum is sometimes stretched and even lacerated, but, as a general rule, it is by displacement that the sac is formed.

When the hernia is of the first degree, a simple *hernial point*, the sac has a conical form; when the viscera descend farther, the sac assumes a spheroidal or elliptical configuration (*interstitial hernia*). As soon as it escapes from the external ring (*bubonocele*), the hernia becomes globular. When it reaches the scrotum (*oscheocele*), its shape is pyriform. When the tumour is in the first stage, the orifice is larger than the fundus: but changes soon supervene; the neck becomes rigid; the peritonæal puckers or wrinkles become united by a sort of cicatrix, called *stigma* by Jules Cloquet. Sometimes these wrinkles exist only on the side on which the peritonæum is reflected over the crest of the fascia transversalis. The internal surface of the sac itself often presents folds analogous to those of a bladder which has contracted after having been largely distended.

Some questions relating to the sac may naturally be considered here. In the first place: Can the sac return into the abdomen when the hernia is reduced? Undoubtedly it can, when only a *hernial point* exists, and the serous envelope has contracted no adhesions; but when the hernia has descended, although it may be reduced with facility, it is difficult to determine whether the sac accompanies it. Jules Cloquet has attempted to elucidate this question by necroscopic examination. He examined two hundred cases of hernia in dead subjects, and failed to find a single case in which the sac could be returned into the abdomen by taxis. There is one case, however, in which the sac may be reduced with its contents, viz:—when strangulation is produced by the neck of the sac itself. I shall return to this point, when I come to speak of strangulated hernia. We may enquire farther, whether a sac that is irreducible by the taxis can be reduced in any other way? Most certainly it can. Jules Cloquet has frequently observed its reduction during pregnancy. This is explicable by the fact that the distended uterus drags the peritonæum from the adjacent parts, and thus reduces the sac by traction. An example has been cited of a reduction of a hernia in consequence of retention of urine. Lastly, the sac sometimes returns spontaneously into the abdomen after protracted repose in bed.

The hernial sac is subject to inflammation; sometimes it contracts adhesions with the omentum; in other cases it becomes thickened, and acquires even a cartilaginous density.

In every hernial sac, three parts are to be distinguished: the orifice, the fundus, and the body. When the orifice is indurated, and its puckers disappear by the formation of a cicatrix, there is formed what we call the *neck.*

There may or may not be adhesions between the ring and the neck of the sack; in the immense majority of cases there are none. Sometimes there are two necks, one at the abdominal ring, the other at the external inguinal ring. In other cases a neck is found below the rings, which shows that the rings have but a slight influence on the formation of the neck. M. Cloquet explains the formation of two or more necks by supposing that the original neck is pushed down by a fresh protrusion. I do not deny the possibility of this mechanism, but I know that it is not constant. Dr. A. Richard operated last year, at the Hospital Saint-Louis, on a young man with strangulated congenital inguinal hernia; a number of strictures were found along the body of the sac, that is to say, of the tunica vaginalis. This case proves beyond contradiction that strictures or necks may be formed without the influence of the rings.

Conversely, there may be two or more sacs with a single neck; the neck adheres on one side to the ring, and is free on the other side; the free portion is forced down and constitutes a second sac.

Many theories have been advanced in regard to the mode of formation of the neck of the sac, a question propounded and solved by French surgeons exclusively. M. Cloquet imagines that it is produced by a kind of narrowing unaccompanied by inflammation, and that when the neck is completely obliterated, the adjacent surfaces of peritonæum adhere through *dryness of the surface.* If we may judge by the mechanism of the obliteration of the tunica vaginalis testis, which takes place by a sort of atrophy unaccompanied by inflammation, M. Cloquet's opinion seems very plausible. We may observe, however, that in the normal state, the serous membranes are humid, and when this humidity is changed to dryness, there is inflammation of the membrane. M. Cloquet's opinion, therefore, amounts to this, that the neck of the sac is obliterated by a slight inflammation, by a phenomenon analogous to what occurs in the pleura or peritonæum, where partial adhesions often result from slight inflammation unaccompanied by secretion.

M. Demeaux, one of the assistant prosectors of the Faculty, has offered a different explanation. He has dissected a large number of hernias, and has arrived at the opinion that the fascia propria, which covers the peritonæum along the sides of the neck, undergoes a peculiar alteration. The adipose matter contained in this cellular tissue is absorbed, he says, and the fascia itself becomes very vascular; after a time, the vessels disappear in a great measure, and the fascia propria is transformed first into fibrous tissue, and then into *muscular* tissue, according to the opinion of the members of the Anatomical Society to whom M. Demeaux exhibited his preparations. I do not believe in the possibility of such a transformation, because it is a phenomena without analogy in the economy. Microscopic examination should confirm such an important observation in pathological anatomy. We may admit the transformation of the cellular fascia into fibrous tissue, but we can go no further; there is red, injected, condensed cellular tissue, but no muscular fibre. When I announced for the first time, that herniæ were always strangulated by the neck of the sac, it was said; it is not the peritonæal neck which strangulates, but the fibrous neck around the peritonæum. This is a complete error; M. Demeaux has never been able to separate the external fibrous neck from the peritonæum. This much, however, has been learned from M. Demeaux's researches, that the transformation by which the neck of the sac is produced, may take place from without inwards. M. Demeaux is content to describe the mechanism he has observed without interpreting it; but it is easy to deduce from an analysis of his admirable descriptions that this process is an inflammatory one. What, in fact, is the pathological process which deprives a tissue of the fat contained in it, and augments its vascularity if it be not an inflammation?

M. Roustan, after investigating this subject for two years at the infirmary of the *Bicêtre*, rejects entirely the ideas of Dr. Demeaux, and asserts that the necks of hernial sacs are always formed by simple adhesion between the puckered surfaces of peritonæum, or else by the exsudation of plastic lympth. This doctrine is too exclusive.

In conclusion, we admit two varieties of neck; in the first the serous surface is smooth, non-cicatrized, the neck being formed by a transformation of the sub-peritonæal cellular tissue; these are rigid and hard necks, more likely to strangulate an hernia than to aid in its cure. In the second variety, which is by far the most common, the serous surface is cicatrized, and presents *stigmata,* resembling the cicatrices of burns on the skin.

It is the received doctrine, that inguinal herniæ are strangulated by the rings, a doctrine altogether erroneous. An unretained hernia dilates the inner ring largely; the outer ring though firmer also suffers from distension. Consider for a moment the anatomy of this aperture. It is formed by the separation of the fibres of the aponeurosis of the external oblique into two pillars, of which one is inserted into the spine of the os pubis, and the other interlaces with its fellow and finds an insertion at the symphysis pubis. Their osseous insertions will certainly maintain the *pillars* separate. Above, the pillars are united by intercolumnar fibres which are usually stretched and sometimes torn by the pressure of the hernia. It is this orifice which is accused of causing strangulation! When you find a constricted inguinal ring coexisting with hernia, bring it to me; I will pay for it. What! shall a ring constrict an hernia till it is gangrenous, and have no effect on the spermatic cord which likewise traverses it?

What is the influence of the neck of the sac on the radical cure of hernia? From time immemorial, it has been known that hernia is sometimes spontaneously cured in children, and that a proper retentive apparatus sometimes effects a cure in adults. We have seen that the neck of the sac had a natural tendency to contract. This, then, is the mechanism of the spontaneous cure of hernia. It is not absolutely necessary that the neck should be obliterated in order that the protrusion should be permanently prevented, a simple stricture is often sufficient. This is only one of the modes in which hernia is radically cured; another consists in the obliteration of a portion of the sac. Until Sir Astley Cooper published his researches on hernia, it was thought that there was only a single ring, and, consistently with their theory, surgeons applied compression on the inguinal orifice. Even after the discoveries of the illustrious English surgeon, their practical teachings were neglected. It was not until I taught that the pad of the truss should press on the internal ring and inguinal canal, that radical cures of hernia have been frequently obtained by bandaging. When the whole sac is compressed, there is some probability of its obliteration by adhesive inflammation.

But before entering fully on the theory of the radical cure of hernia by the bandage, let us examine into what was done with this object before trusses were rationally applied.

Amulets and charms were first employed, then internal remedies, then topical applications, then trusses were used, either alone or aided by local remedies and rest in bed, and lastly operations were called in requisition.

You will not expect me to dwell on the charms and amulets. A principal one was in vogue in Germany in the seventeenth century. It consisted in cleaving an oak asunder, and carrying the subject of hernia around the cleft tree, while certain mystic phrases were recited. Unhappily these words have not been transmitted to modern surgeons, and we can no longer cure hernia in this way. Van Helmont reports a modification of this process: The patient was passed between the separated portions of the oak, and if he was not cured, it was because something had been omitted in the cabalistic rite! You laugh, gentlemen, but you will see presently that men with some pretensions to science have adopted methods which are quite as stupid. It is said that physicians are incredulous; what an error! perhaps no class of men are deceived more readily.

The internal remedies which were given for the cure of hernia, were lavements of chamomile infusion, clover, the hernia herb, and powdered hares-flesh dissolved in red wine. Astringents were also used *to contract the inguinal ring!* Plasters of aloes and comfrey* were applied to hernial tumours, and bags of iron filings were hung at the groin, while powdered loadstone was given internally, on the hypothesis that the mutual attraction of these substances would reduce the tumour, constrict the ring, and cure the hernia!—Are doctors credulous?

These, and many other absurdities, were in vogue in the seventeenth century. The annals of our science have preserved for us the history of the Prior of Cabrières, a truly charitable man, who distributed gratuitous remedies for hernia to the afflicted in his province. His fame reached the king's ears, and in 1680, Louis XIV. sent for him to come to court and consulted him. His method was to administer a draught daily, to apply a plaster to the tumour, and over this a bandage.† After his death his remedies were forgotten.

A German physician, Geiger, saw cases of hernia cured by the application of a hare's skin, which had been macerated in red wine; he saw this, the ingenuous man, and he noticed that the remedy was most successful when the skin was taken from a hare that was still at the teat! Houlier, an illustrious physician of the seventeenth century, also cured hernia by this method; he said that the plaster should be worn for nine days.—Why will physicians dabble with surgery?

In the eighteenth century Lecat, who bore off all the prizes of the Academy, so that they besought him not to compete any more, Lecat cured hernia by the *hernia-herb* steeped in wine.

There is still in La Vendée a brave fellow called Peter Simom, who enjoys an immense reputation as a curer of hernia. He is so honest that he makes no secret of his method; he uses a plaster of king-fern (*osmonde royale*), and a bandage. He has once or twice offered to send me specimens of his plaster, and patients cured by him. I lately saw one of the latter by accident; it was an ecclesiastic who came to consult on an affair quite foreign to medicine, and said as he was leaving; "You pay some attention to the subject of hernia?—Yes.—Then you have heard of Peter Simon?—Yes.—Well, Sir I am an example of the success of his method." I begged the curé to show me his groin; I found there an hernia as big as my fist. So great is the influence of the imagination on our sensations and health.

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* Symphytum officinale.

† The following was the composition of the draught:—

For a person under ten years of age.—Take four drops of *spirit of salt;* mix them with two spoonsful of red wine, and administer in the morning before breakfast.

For an adult.—Mix five drachms of *chloro-hydric acid* in a pint of red wine. Administer two ounces each morning for seven days; then prepare the remedy anew, and continue until 21 doses have been taken.

The plaster was more complex:—

Mastiches in tears, ℥ss.; Laudanum, ʒiij.; Three cypress nuts; Hypocistio, ʒj.; Bole Armenian (terra-sigilata), ʒj.; Black pitch, ℥iij.; Venice turpentine, ℥j.; yellow wax, ℥j.; Powdered Comfrey-root, ℥ss. Pulverise the substances that require it, and then heat the whole mass stirring it constantly until it acquires the consistence of a plaster.

We have spoken of some of the topical applications which were once in vogue. There were various others, composed usually of powdered tan, pomegranate, or cypress. Even our in day, Jalade-Lafont, of whose views we shall speak when we come to the subject of *Bandages*, Lafont proposes to cure hernia radically by trusses with medicated pads. Nineteen years ago, a physician delivered a long discourse on this subject to the Academy of Medicine. Even Richter appears to have attached some importance to these local applications, but it is to be noted that he employed astringents powerful enough to produce inflammation of the integument, which might possibly be propagated to the sac and produce its obliteration. I need not tell you that to expect astringents to influence in any other way, as a tissue from which they are separated by the skin and half a dozen other textures would be as idle as to apply the same astringents on one side of a stone wall, and to look for their effects on the other side.

From the topical applications, we pass to the mechanical contrivances for the cure of hernia. It cannot be doubted that proper bandaging alone may effect the radical cure of hernia in infancy, in youth, and until the age of 35. I will go farther, and say that hernia is often cured radically by an ill-implied bandage. You will learn presently what a pity it is that this part of surgery is abandoned to the venders of trusses. J. L. Petit explained the operation of the bandage in the cure of hernia, by supposing that the sac disappeared by returning into the abdomen. This is only true in hernia of the first degree. When a true sac exists, with a narrow neck, it never disappears or returns into the abdomen. In nearly all, if not in all the cases treated in Petit's time a cure resulted from an obliteration of the neck. The obliteration was limited to the neck because though anatomists reiterated: "Two rings and a canal," the surgeons said; "A single ring," and applied their pads over the external ring instead of on the inguinal canal. It was not until after Sir Astly Cooper's discoveries, when I began to insist on the proper method of applying the truss that these vicious methods were superseded. Since I have taught the correct mode of applying the truss, cures have been obtained by the narrowing of the rings and the obliteration of the canal. In this way, I have cured a large number of herniæ in subjects of all ages, from infants of a few months to adults of 30 years. I have kept sight of many of these patients and know that their cures were permanent after the lapse of ten years. My opportunities for necroscopic examination, however, have been very limited. In my private practice, I have never been able to verify by dissection the state of the parts after a radical cure of hernia, and in hospital practice we are rarely able to keep our patients in view after any considerable lapse of time.

I infer, however, from the fact of the narrowing of the neck, that it is inflammation which procures the radical cure of hernia. Now if we recollect that true strangulation is accompanied by inflammation, that pseudo-strangulation coincides with simple peritonitis, we shall perceive that after reducing the hernia under these conditions, the sac is left precisely in the state in which adhesion may be most readily induced. Put your pad over the canal, and press together two surfaces covered with coagulable lympth, and you may expect to effect a radical cure in eight days, by thus seizing the opportune moment. When I acted as Richerand's substitute at *Saint Louis,* I reduced a strangulated hernia by the taxis for a young man who was brought there, and immediately after the reduction, I applied a bandage and enjoined a recumbent posture. Eight days subsequently, the patient was able to walk about. He was told to cough, and not even an *hernial point* could be detected. I saw this man five years afterwards; his hernia had not returned.

M. Roustan has reported a more conclusive case than this. An old man at the *Bicêtre* had a pseudo-strangulation which was relieved by the taxis. A truss was applied over the inguinal canal. At the end of a week the hernia was apparently cured, and the patient left the hospice. A year afterwards he entered my ward in a dying state, and we inherited his hernia. We found the serous surface agglutinated along the whole extent of the inguinal canal; the adhesions were not complete, indeed there were small lacunæ here and there; but, reflect that this was an old man, and how admirable this result appears.

It is necessary, then, in order that the sac may be obliterated, that its walls should be pressed together while covered with coagulable lymph. All who have endeavored to procure rapid and radical cures of hernia by the bandage, have perceived that very powerful compression was necessary. Harrison and Carpenter's pad is almost pointed. Jalade-Lafond the elder used an iron pad. Such instruments produced inflammation of the integument, which in some cases was propagated to the sac and caused its obliteration.

We may attain the same result, however, with an ordinary truss, which may be worn without pain or inconvenience. Gentle but permanent pressure excites an irritation in the deep seated tissues which is sufficient to induce adhesion between the walls of the sac. As a general rule, hernia is cured in this way at the end of six months, but it is likely to return if the patient indulges in violent exercise; and it is prudent, therefore, to continue the use of the truss for eighteen months or two years, at which date the cure may be regarded as complete and radical.

This is not the only mode in which hernia is cured. Ambrose Paré relates* the history of a priest, a vicar of the church of Saint-André-des-Arts, who, while labouring under hernia, was obliged to keep his bed for six months on acconnt of another disease. Ambrose Paré told him that his hernia was incurable. He wore a truss, however, during this period, and when he recovered he became quite fat, and his hernia was cured. Twelve years afterwards he died, and the *curé* of Saint-André-des-Arts allowed Ambrose Paré to make an autopsy (which would seem to prove that he was not as bad an huguenot as has been asserted). An adipose mass was found in the place once occupied by the hernia. I have sometimes observed this anatomical anomaly in the living, often in the dead subject, but without knowing whether hernia had existed antecedently. Paré goes on to relate other cases in which the cure of hernia coincided with the acquisition of corpulence. We must not exaggerate the importance of these facts, or imagine that the development of fat in the cellular tissue which lines the peritonæum around the ring is alone sufficient for the radical cure of hernia. We can admit only that corpulence is a favourable condition, and that extreme leanness renders the cure of hernia almost impossible.

(*To be Continued.*)

III.—*Course of Lectures on General Physiology.* By CLAUDE BERNARD. Delivered before the Faculty of Sciences of the College of France. LECTURE II.†—*On the General Properties of Living Beings.*

In the first lecture, it was stated that the manifestations of life were susceptible of division into three groups:

1. The elementary phenomena of life, the explanation of which must be sought in the properties of the elementary living tissues, the liquids, semi-liquids, and solids;
2. The functions, that is to say the operation of the organs constituted by anatomical elements combined for a common end;
3. The individuality.

The properties of living tissues are *contractility* and *irritability*. The functions are, for example, *digestion*, *respiration*, *etc.*

———After studying the elementary phenomena and the functions, we should study the individual. The united functions constitute an unity; that is to say, they all tend towards a common end; I speak of their inmmediate or *physiological* end.

We shall examine in the first place the elementary phenomena. If there is one truth demonstrated in physiology it is this: that it is impossible to explain the phenomena of life by any single principle.

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* De la Curation des Hargnes, liv. 8, ch. xv.

† See *ante*, Vol. III, p. 397.

The efforts which have been made with this purpose have ended in nothing, and have now a merely historical value. As soon as a single principle or unique force is supposed, an hypothesis is erected which cannot, by any possibility, be verified. Life is more difficult of explanation after this fashion than are the properties of inorganic matter; the science of life agrees less with such a theory than even chemistry or physics.

When Haller, a century ago, discovered *irritability*, it was thought that he had found, if not the *universal force*, at least the essential principle, the *key* of vital phenomena. In reading the books of that period, we see what a profound sensation was produced by the discovery of *irritability.* In the first burst of enthusiasm, they did not hesitate to compare Haller to Newton, for Haller had generalized the property of the contractile fibre, and had explained all the phenomena of life thereby. Subsequently, it was found that this explanation was altogether insufficient; it neglected, in fact, all the chemical and physical phenomena which occur in the individual. In our day, it is clearly recognized that it is necessary to admit a great number of principles in order to explain life. We shall admit, then, three grand orders of phenomena:

The vital phenomena,
—— chemical ——
—— physical ——.

These three denominations indicate that we must expect to find in the organism all the physical and chemical phenomena which occur in the external world. It would be superfluous to explain the expression, *vital phenomena ;* we merely state thereby, that, besides physical and cheminal phenomena, *there exist faculties, forces, or properties which are only observed in the living organism;* these are what we term vital phenomena; we do not pretend to explain them, any more than to explain physical and chemical phenomena; first causes will ever remain beyond our grasp; we must be content to pass them by as ultimate facts, for so only can we hope to progress in science.

Vital phenomena are not contrary to chemical and physical phenomena. Bichat thought that they were, and in accordance with his belief in this opposition, he wrote this phrase:

> "In nature there are two orders of properties or phenomena: 1. the *vital properties ;* 2. the *physico-chemical properties ;* in the organism, the vital properties tend to maintain, the physical properties to destroy, the organism."

The definition of life which Bichat has bequeathed us is but the expression of this idea. ("La vie est l'ensemble des fonctions qui résistent à la mort.") For us, there is no such opposition; *all* these properties coöperate for the maintenance of life. *The physical, chemical, and vital properties combine to promote the manifestations of life.* A number of properties which were once termed vital, have been latterly recognized as belonging to the domain of physics or chemistry.

If we examine the phenomena of life with reference to their proximate causes, we shall find that, among these elementary properties, the most universal is the faculty of *nutrition.* This term is frequently employed in a general way to express the faculty of nourishing themselves which living bodies possess; but it may serve also to designate the faculty which the organic molecule has of appropriating and assimilating substances necessary for its growth.

Nutrition then, is a fundamental property appertaining to all living beings, whether animal or vegetable; it is a kind of elective attraction which the living molecule exercises on the medium by which it is surrounded in order to appropriate the elements which are to constitute it.

This property belongs to all the elementary tissues, whether they consist of cells, fibres, or nervous corpuscles; whatever may be the form of the molecule, it is nourished by attracting to itself the principles which it requires. We may borrow a comparison from the inorganic world in order to give an idea of that nutrition of organic elements which is effected by secretion from the circulating medium; we shall thus obtain a very clear conception of what takes place in the organic kingdom. Let us take crystals of different salts, of sulphate of soda and nitrate of potassa, for example, substances differing chemically, which increase only by the addition of identical molecules. Place these crystals in a solution of saltpetre and glauber salt; the crystal of sulphate of soda will enlarge, and so also will the crystal of nitrate of potassa; there is no confusion; the sulphate of soda enlarges by the adjunction of sulphate of soda, and the nitrate of potassa goes to the crystal of nitrate of potassa. It is the same with organic molecules, whose circulating medium is blood or sap; each molecule attracts the principles necessary for its conservation, and nothing more. Muscular fibre assimilates fibrine; nervous fibre attracts albumen and fat; the elements of bone take lime and the phosphates; each cell, according to its function attracts such and such elements. Thus, then, the property of appropriating nutriment is the capital property of all the tissues.

I have only desired to make a simple comparison by what I have said, since phenomena in the organic and inorganic kingdoms are of different natures. There is a ceaseless and rapid movement in nutrition which is never observed in inorganic substances in a continuous manner. While a tissue is constantly repaired at the expense of substances derived from its circumambient medium, it loses substance simultaneously, effete particles being thrown off in consequence of its incessant activity. Nutrition involves *disnutrition,* or disorganization; like the process of repair, the process of waste is continually in operation; these processes are in direct relation; the more a fibre loses in consequence of its functional activity, the more it must assimilate to preserve its equilibrium. This exchange is rapid in proportion to the activity of the manifestations of life. Experiments which have been made with precision on some of the higher animals have shown that an individual receives about one tenth of his whole weight of new material into the economy in twenty-four hours and expels an equal quantity of effete matters.

The organic molecules or tissues possess their natural properties only while these processes of repair and waste are going on. The muscular fibre has the property of contractility; while bathed in blood, it loses substance each time it contracts, and at once it borrows new material from the vivifying fluid that surrounds it. If the fibre is isolated from the organism, this renewal becomes impossible, and, after a longer or shorter interval, it loses its contractile power. The period during which the fibre separated from the body retains its power varies according to the rank of the animal in the organic scale. In the lower orders, in molluscs, and even in reptiles, this faculty is preserved long after death, because the phenomena of nutrition in these animals are produced very slowly.

An incessant movement, then, is necessary for the maintenance of the organism, a movement which involves a rapid renovation. The circumambient medium from which molecules derive materials for their reconstitution, in the superior animals, is the blood. The blood is especially devoted to the reproduction of the solids, muscular fibre, nerve texture, etc. In a word, if we suppose a living organic molecule, accessible to the nutritive material which it must assimilate for the maintenance of its functions, we comprehend that the molecule can live in this medium; but when we consider the individual in whom myriads of these molecules are included, we perceive that it is impossible that they should be all in relation with the exterior; an artifice is requisite, therefore, to place them in relation with their proper medium. The blood is the medium, the circulation is the artifice.

In a complex organism, the living molecules are everywhere in contact with the blood; now what is the blood? It is a liquid containing all the substances which surround the individual and are necessary to his nutrition. It contains oxygen; it contains the substances dissolved in digestion, and all these principles come in contact with each molecule through the medium of the circulation.

Here, then, is the first and most important of the vital properties—*nutrition*. It is a property or affinity which is inorganic instead of being chemical. As certain chemical substances attract and incorporate with themselves certain identical molecules, by affinity, so likewise do organic substances.

Nutrition is a primary force which we must admit, without seeking to explain it by causes which are beyond our methods of investigation.

As heat and electricity are produced by the movement of chemical affinity between inorganic molecules, so vital phenomena, such as nervous force, etc. result from the affinities of organic molecules. These are fundamental faculties which must be kept in view before examining the function .

The first general property is *nutrition;* the second is *irritability*, or *excitability*. This property, like the first, is general, common to all living beings, whether animal or vegetable.

All living beings enjoy the property of being excited by external agents; but this kind of irritability may co-exist with a low grade of vitality. There are certain gelatiniform masses which constitute inferior species of animals. These animals contract under the influence of external agents, and execute obscure movements. Absorption, nutrition, and respiration appear confounded in their beings. Their substance, their proper medium, and the faculty of absorption, seem to be their three conditions of life; they have no spontaneity; they *receive*, but they do not *take*.

Excitability is the property which living beings possess of reacting under the influence of an external medium, a property independent of any particular tissue, common to animals and vegetables.

Another property is connected with the one just mentioned which appertains only to animate beings, the property of *contractility*. This property involves another, termed *spontaneity*, as a result of which animals can move themselves, and do not require an external cause to provoke in them a reaction.

Reaction proceeds from external agents, spontaneity from internal agents. Some plants, the mimosæ for example, react under the influence of external agents, but they never move spontaneously. It has been asserted that certain spores moved; but these movements are vague, and are occasioned by a force differing from spontaneity. Animals alone possess both excitability and spontaneity. The existence of spontaneity involves the existence of a special tissue, the *nervous* tissue. An animal may possess excitability without being endowed with nerves, but it cannot execute spontaneous motions without possessing contractile muscular fibre and a nervous structure. Excitability and spontaneity are two distinct properties; we have spoken, for example, of animals capable of excitability alone; but besides this, we can demonstrate the independence of these two faculties in an individual possessing both of them, and in doing so, we shall find that each is connected with a particular tissue. We localize:

Excitability . . . in the *muscular* tissue;
Spontaneity . . . in the *nervous* tissue.

One of these faculties may survive the other, as we may demonstrate by poisoning an animal. A cold-blooded animal is most suitable for this experiment, for these faculties are more persistent in that class of organisms. If, then, we poison a leach with a substance which annihilates the activity of the nervous system, without affecting the muscular system, we shall readily perceive the independence of these two faculties. There is a toxic agent which produces this effect, the Curare or Woorara Poison, a substance which has been greatly talked of recently, and of the composition of which little is known. The curare is prepared by savages who refuse to reveal their process, and consequently the most contradictory suppositions have been proffered by those who have examined this obscure subject. It appears certain that curare contains the venom of some species of serpents. However this may be, it is sufficient for us to know the properties of this poison. If it is introduced into the circulation it causes death; if it is injested into the stomach, it is inoffensive. No doubt certain unknown circumstances preclude its absorption from the digestive tube, while its introduction into the vascular system enables it to come in contact with the organic molecules and to cause death.

In the cold-blooded animals on which we shall experiment, curare acts only on the nervous system, leaving intact the other elements of the organism, the muscular, secerning, etc. If we wound one of these animals and introduce curare into its circulation, we deprive it of all nerve force; we *take away its spontaneity.* This is proved in the experiment I show you.

Here the celebrated professor exhibited to the audience a dish of leeches poisoned with curare. The animals were motionless and seemingly inanimate, but when touched with a forceps they executed movements without being able to progress or shift their positions; their muscles contracted irregularly, and without any object, so to speak. These movements lasted only a few seconds.

This experiment, Gentlemen, shows that excitability and spontaneity are two distinct properties, and that spontaneity only exists through the nervous system.

There is another agent whose effects are the converse of the one whose effects we have just seen; it destroys muscular contractility and leaves the nervous system intact. This substance is *nicotine,* in large doses. A difficulty here presents itself, however; the nerves outwardly manifest their action solely by movements; now movements can only be executed through the agency of the muscles; if, then, we annihilate the contractile power of the muscles, we deprive ourselves of the only means of ascertaining the existence of nervous activity. We must have recourse to an artifice in order to get at the fact we are seeking. We put a frog in a box; one of its legs is brought out at an aperture and secured and its vessels are tied. All vascular connection between this limb and the rest of the body having ceased, we poison the frog by forcing nicotine down its throat. Thanks to the circulation every part of the body is poisoned except the limb in which the vessels are tied. We irritate the skin and excite the nerves of the limbs; every limb is motionless, except the leg in which the vessels are secured, where the poison has not penetrated and the muscular contractility remains intact. Here then is an experiment which again proves that these two forces, Excitability and Spontaneity, are distinct and separate. O.

CHRONICLE OF MEDICAL SCIENCE.

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *The Humeral Theory of Epilepsy.* By ROBERT B. TODD, M. D., Physician to King's College Hospital.

A clinical lecture, on a case of renal epilepsy, delivered by Dr. Todd at the Hospital of which he is the physician, was made the occasion of some important and novel suggestions, which we will present in an abridged form to our readers. The frequency of this intractable disorder, its distressing symptoms and its destructive influence on the brain and intellectual faculties of its unfortunate victim, make it worthy of the closest investigation.

Dr. Todd alludes to the discovery of the frequent association of epilepsy with *renal disease,* thus throwing an amount of light on a class of cases which have heretofore been treated almost entirely by empirical remedies, but which are now capable of being successfully managed on rational and scientific grounds. He proposes from the information thus derived, to construct a theory of the cause of epileptic fits generally. He says:

> I hold that the peculiar features of an epileptic disease are due to the gradual accumulation of a morbid material in the blood, until it reaches such an amount that it operates upon the brain in, as it were, an explosive manner; in other words, the influence of this morbid matter, when in sufficient quantity, excites a highly polarised state of the brain, or of certain parts of it, and these discharge their nervous power upon certain other parts of the cerebro-spinal centre in such a way as to give rise to the phenomena of the fit. A very analogous effect produced is that which results from the administration of strychnine, which is best seen in a cold-blooded animal, as the frog. You may administer this drug for sometime, in very minute quantities, without producing any sensible effects, but when an accumulation has taken place up to a certain point, the smallest increase of dose will immediately give rise to the peculiar convulsive phenomena.

This, then, may be considered as the humeral theory of epilepsy. A morbid matter is generated which infects the blood. This morbid matter has a special affinity for the brain, just as the strychnia has for the spinal centre. The source of this morbid matter may be in the nervous system, probably in the brain itself.

To give a more definite character to this humeral theory, we need to discover a morbid matter in the blood in every case of epilepsy, and this has to a certain extent been accomplished.

The clue to a discovery of this kind was first given by the observations of Prevost and Dumas upon the effect of *excision of the kidney.* They found that a removal of the kidneys was followed by an accumulation of urea in the blood, resulting in convulsions and coma, and an epileptic state. The clinical observations of physicians being directed to this point, soon developed the fact that disease of the kidney was apt to be followed by epileptic symptoms, and that in these cases, urea was found in the blood:

> "A connexion was thus clearly established between the presence of urea in the blood, defective renal secretion, and the epileptic condition: but whether the active poison is urea, has not been yet decided. Frerichs has lately affirmed that the morbific agent is carbonate of ammonia, a product of the decomposition of urea. All that we really know is, that in certain states of diseased kidney when the secretion falls below a certain point, urea will accumulate in the blood, and epileptic seizures will ensue. Should the patient die, we find no brain lesion to account for the phenomena, but unequivocal evidence of diseased kidney.
>
> Imperfect as is the present state of our knowledge on this point, may we not see in the facts thus detailed a gleam upon the horison announcing the approach of some brilliant discovery which no doubt the advancing state of organic chemistry will yet develop, and which will throw great light on the obscurest disease in the whole range of maladies which affect the human frame."

The experiments of Frerichs went to show that the comatose and epileptic symptoms ensuing on kidney disease were attributable to a development in the blood of carbonate of ammonia, arrising from decomposition of the urea. This carbonate of ammonia is the poisonous matter. Frerichs injected this substance into the veins of animals, and an epileptic condition was induced, which passes away as soon as the carbonate of ammonia is eliminated from the system. He also found that when urea was injected into the blood, carbonate of ammonia may be detected in the breath of the animals by holding a rod dipped in hydrochloric acid under the nose, when the characteristic white fumes indicate the presence of an alkali, and the blood is likewise found to contain it in an appreciable quantity.

Dr. Todd instituted a series of experiments in his hospital for the purpose of verifying Frerich's conclusions, but though urea was easily detected in the blood, the tests for carbonate of ammonia were not satisfactory.

2. *Typhlitis and its Treatment.*

The learned terms Typhlitis and Perityphlitis (τυφλον cœcum) are the names by which is designated a disease which consists in inflammation of the cellular tissue around the cœcum. The affection, although unrecognised until quite of late years, is one which is not very infrequent, and possesses well-marked features, and as the names bestowed are expressive, and at the same time not inelegant, there can perhaps be no good reason against their general adoption. The reason why this portion of the intestinal tract should be liable to inflammations of peculiar and isolated nature, become evident when its anatomical relations are considered. First, there is the ileo-cœcal valve, very likely to obstruct occasionally matters in their onward passage; secondly, the large pouch of intestine, well fitted to permit of irritating accumulations of fæces; thirdly, the vermiform appendix subject to impactions, and capable when malplaced of partially strangulating the gut to which it is attached; lastly, around all this complexity of structure there is an unusually large amount of loose cellular tissue, from its nature prone to be the seat of inflammatory effusions. Dr. Burne, to whom the Profession is indebted for some of the earliest published information on this subject, gives cases which exemplify the actual influence of each of these hypothetical causes. In the great majority of instances, however, the disease depends not upon one, but upon several of these causes combined. A portion of undigested food is refused passage at the ileo-cœcal valve, and thrown back into the cœcal pouch, becomes the nucleus around which a fæcal accumulation forms, which occasions obstruction, and ultimately inflammation of the bowel results, attended by copious effusion into the tissue surrounding it. Cases of this nature must have fallen under the observation of most experienced practitioners. A patient complains of pain in the lower part of the right side of the belly, which, after gradually increasing for several days, has at length become very severe; he is feverish, and generally there is an account of the bowels having been more costive than usual. On examination, a diffused, softish, and very tender swelling is found in the iliac fossa. Leeches are applied, and a brisk purgative given. In a few days the symptoms are quite relieved, and the tumour has vanished. Such is the more ordinary course of these cases, but every now and then more serious results ensue, and actual suppuration takes place. The cases in which abscess forms are probably either those in which the disease has been neglected, or the patient's constitution is pecularly irritable, and those in which the exciting cause is the impaction of some foreign body, which cannot be removed by purgation, as of a bone in the cœcum, or a fruit-stone in the appendix. This latter class are of course the most serious, since, as the cause is almost irremediable, the abscess will probably never close.

The treatment of this disease, which has been pursued in the English hospitals, is simple, and generally speaking successful. When in the acute stage the lancet is the great remedy, breaking down the force of the inflammation, relieving pain, and relaxing spasm. In the two cases which we have met with, the grade of inflammation was not high, and the free use of leeches applied to the tumour in the groin, frequently reapplied, and always followed by warm poultices covering the belly, was quickly followed by relief of the symptoms. Purgatives of a mild character also expedite a cure, and it is often necessary to repeat the aperient agent daily, so as to prevent the accumulation of fæcal matter at the ileo-cœcal valve. The two treated in the Middlesex and St. Thomas's hospitals, and reported in the Medical Times and Gazette, were of the sub-acute form and both terminated favourably without the formation of abscess, under the antiphlogistic and purgative treatment.

3. *On the Cadaveric Lesions of Subjects who have Died of Cholera.* By M. Rostan.

While the cholera was prevailing in Paris last winter, Professor Rostan devoted a portion of his clinical course to its consideration. We extract from the *Gazette des Hôpitaux*, No. 141, the following remarks on the morbid anatomy of cholera.

"Although the pathological anatomy of cholera, like that of epidemic diseases in general, throws no light on the organic cause or anatomical seat of the principal phenomena of the disease, but only reveals the secondary lesions which are consecutive to the action of the unknown cause of the initial symptoms of cholera, it must not be altogether overlooked.

"In the autopsies which have been made during the present epidemic, nothing has been noticed that was not already described and recorded; what we have to say, therefore, will be mainly a repetition of what was said in 1832 and 1849.

"The appearance of the cadaver in subjects who have died in the cold stage of cholera resembles the aspect of the patient in the last moments of life. We find the bluish tinge of the skin of the face and hands, the livid lips, the rigid limbs, the sunken orbits, the emaciated countenance, that were so terrible during life. We have also noticed in some patients who have died at *Hôtel-Dieu*, deep ulcerations of the cornea, and a shrinking of the eye-ball. One characteristic which is peculiar to the corpses of cholera subjects, consists in the persistance of the temperature which existed at the time of death, a temperature much below the normal standard, as every one knows, but much higher than the ordinary temperature of the cadaver.

"In the internal organs, we have found large ecchymoses on almost all the mucous surfaces, resulting doubtless from a mechanical stasis of the blood.

"We have noticed also, that remarkable and characteristic dryness and pitchy state of the serous membranes, peritonæum, pleura, pericardium, etc., and shreds of an albuminous substance adhering to these surfaces.

"One of the principal lesions, one to which great importance was formerly attached, is that granular eruption on the intestines, termed *psorenterie* by MM. Nonat and Serres, which is nothing but a transitory hypertrophy of the muciparous follicles of the intestinal mucous tract. We call this hypertrophy *transitory*, because it is proved to be ephemeral by the fact that it is not found in those patients who linger for a time, or in whom reaction has occurred.

"The blood of the patients who have recently died, appeared as it did in the former epidemics; it was viscous and thick, resembling currant jelly very closely.

"We know nothing positive in regard to the chemical changes of the blood, urine, or other secretory or excrementitious products of the economy. Some persons have dwelt on the existence of albuminuria, and others have asserted that the urine contained sugar. The air exhaled by cholera patients has been analyzed, also, but the results hitherto amount to nothing." O.

4. *The Pathology of the Pancreas.* By Dr. EISENMANN.

It has been one of the victories of modern experimental physiologists to elucidate the functions of the pancreas. Close upon the development of the physiological action of an organ, will follow the investigation of its various pathological states, and thus we see that the pathology of the pancreas is attracting the attention of the profession. Dr. Eisenmann in the *Prag. Vjhrschr.*, and translated in the Medical Times and Gazette, has some observations on this subject, which although imperfect, are worthy of notice.

An unmarried woman, aged 57, of robust constitution and regular habits, who, excepting an attack of inflammation of the liver and of hæmorrhoids, had never suffered from any serious illness, became out of health in the summer of 1852, and suffered from a slight gastric fever. After the administration of emetics the fever disappeared, the tongue became clean, the feeling of illness improved, and the appetite returned; but she did not completely recover; and soon she lapsed into the following state:—With a perfectly clean and normal looking tongue; she lost her appetite to such a degree as to be able to take only very small quantities of nourishment; two hours after eating, there supervened a feeling of oppression and weight in the region of the stomach, mounting to the chest, and producing pain, and interfering with respiration. To this came nausea, frequent eructations, deficient in both taste and smell; occasionally sickness; the evacuations were scanty; the urine was turbid, and sometimes deposited a reddish sediment; the clear colour of the face changed to a greyish hue, and the pinched features expressed emaciation; there was scarcely any fever. Manual examination detected no abnormal enlargement, but pressure over the stomach caused pain. In the fæces there was no fatty matter; they were scanty, and of greenish gray colour, which showed that the secretion of bile was diminished, but not suppressed. After trying various remedies, the patient took the Friederickshall Bitterwater, under which she recovered. The author then refers to seven cases of disease of the pancreas, recorded by Bright, Lloyd, Elliotson, Gould, and Lusanna. While, in the six first cases, the degeneration of the pancreas was ascertained by *post-mortem* examination, the case of Lusanna, which was cured, is diagnosed by the author as Pancreatitis. The symptoms were similar, only the evacuations in Lusanna's case contained fat. It is not yet possible to point out with accuracy the means of determining this affection. The author's classification of symptoms is hardly sufficiently indicative. He gives—feeling of weight in the region of the stomach, coming on about two hours after eating, and extending to the chest, where it causes a feeling of oppression; alteration or loss of appetite; frequent eructations of gasses, deficient in both taste and smell; feeling of sickness; inclination to vomit, with clean and not swollen tongue; constipation; expression of illness about the face; depression of the spirits.

5. *Strychnia in the Cold Stage of Cholera.* By M. ABEILLE.

At the meeting of the Academy of Sciences on the 19th of June, a communication was received from Dr. Abeille, physician to one of the military hospitals of Paris, in regard to the remarkable efficacy of the sulphate of strychnia in the cold stage (*période cyanique-algide*) of Asiatic cholera.

"From the 26th of April to the 3d of June, I administered strychnia to 22 persons with the following result:

"In 19, a progressive reaction occurred in from 4 to 24 hours after the administration of the remedy. In some cases the reaction was excessive and general blood-letting was necessary.

"Such a result is very remarkable, and shows strikingly the power of strychnia; for, as a general rule, five-sixths of the patients who reach this stage of cholera, succumb before reaction is established. Even those who pass through this terrible stage may die of the complications of reaction. This is what happened to 9 of my patients, who succumbed in what is called the torpid state.(?)

"The ultimate proportion of cures, 10 in 22, is much greater than has been attained in the same conditions heretofore."

Dr. Abeille promises a memoir and further details in a short time.

SURGICAL PATHOLOGY AND OPERATIONS.

1. *Aneurism Treated Successfully by Injections.* By M. JOBERT.

In the Bulletin of the Imperial Academy of Medicine for May 16th, we find a communication from Jobert (de Lamballe) containing the history of a case of false aneurism of the right brachial artery, successfully treated by injections of a solution of the perchloride of iron.

The aneurismal tumour was the size of a walnut; its pulsations were synchronous with those of the heart; a distinct souffle was audible when the stethoscope was applied over it; when the brachial artery was compressed the susurrus ceased. The aneurism had been produced by a puncture during the operation of venesection.

On the 20th of February, M. Jobert had punctured the tumour with a fine trocart, the humeral artery being compressed. Six drops of the ferruginous solution were injected. There was little pain or inflammation subsequent to this operation. The pulsations were feebler for a day or two, but the amelioration was but temporary.

On the 24th of February, a second attempt was made. The tumour was punctured as before; but, in consequence of the insufficient compression of the brachial artery, a jet of florid blood, mingled with grumous matter, issued from the canula as the stylet was withdrawn. When the artery was again properly compressed, six drops of perchloride of iron were injected into the sac. The patient now experienced smart pain in the tumour extending along the course of the radial and ulnar arteries.

During the night subsequent to the operation, and on the two following days, the patient was feverish, agitated, and sleepless.

On the 27th of February, M. Jobert examined the tumour. It was painless on pressure, and did not pulsate, it was hard, and nowhere offered the signs of fluctuation. The pulsations of the radial artery were feeble; the ulnar artery could not be felt; the right hand was much colder than the left.

On the 6th of April, the pulsations of the radial artery of the arm that had been operated on were as full and strong as ever, and the ulnar artery could be readily distinguished, though its pulsations were feeble. The tumour had much diminished in size, and had a cartilaginous feeling.

The case was treated at the Israelite Hospital; the patient, Leopold Lœb, was a young man of eighteen years.

In the "reflections" with which his paper concludes, M. Jobert says, that the want of success in his first operation depended on the insufficiency of the quantity of coagulated albumen. The circulation was not arrested, and, as has occurred in many other experiments, the albumen solidified by perchloride of iron was dissolved by an excess of albumen. This phenomenon occurred over and over again in a woman on whom M. Jobert injected the solution of the perchloride into an ovarian cyst. The contents of the cyst became solid, but soon resumed the liquid form, in consequence of the solution of the coagulated albumen in the albumen which continuously exhaled from the walls of the cyst. M. Jobert lays it down as a law that when aneurisms are treated by injections, the operation will inevitably fail unless the calibre of the vessel is entirely obliterated, and the coagulum of albumen thus preserved from contact with the serum of the blood.

When M. Jobert did his second operation, some carbonized matters escaped at the moment the puncture was made. M. Herbert, a chemist, analyzed these matters, and found that they consisted of albumen, perchloride of iron, fibrin, and a little of the colouring matter of the blood.

The perchloride of iron, continues M. Jobert, is destined to render incontestible service in the treatment of aneurisms, but not in all cases, or beyond certain limits. Its abuse has brought discredit on it, but the best things have been abused. I have no doubt that in addition to the disadvantages common to injections and the ligature, injections have a peculiar disadvantage resulting from their irritant action on the walls of vessels; but they can be employed where the ligature is out of the question, and in various circumstances may advantageously supercede it.

The perchloride of iron is best adapted to traumatic aneurisms, with sacs exempt from inflammation. In old aneurisms with unhealthy walls, its employment is inadmissible. O.

2. *Experiments by Injecting the Perchloride of Iron into the Arteries of Animals.* By M. GIRALDES. (*Gazette des Hôpitaux.*)

M. Giraldes has published, in an interesting Mémoire, an account of thirty-five experiments by the injection of the perchloride of iron into the arteries of animals. These experiments were commenced in the month of April, 1853, and continued to the month of March, 1854. They prove that a few drops of the perchloride of iron, of variable density, injected into the carotid artery of a horse, coagulate the blood contained in a portion of the vessel somewhat less than an inch in length. Thus, two drops at 49° areometer of Beaumé, three drops at 30°, and six drops at 15° produce this coagulation. The changes produced upon the blood and upon the walls of the vessel by the coagulating agent vary, *cæteris paribus*, according to the density of the perchloride. Five drops at 49° mummify (*momifient*) completely the blood contained in the artery. The same quantity of the perchloride at 15° to 20° produces a sort of clot formed by blood combined with the salt of iron and by normal fibrine. But the action of the coagulating liquid is not completely exhausted upon the blood; it extends to the coats of the artery. In the first case, these membranes become disorganised; they present a yellowish-brown discoloration; become thinned, horny, and in fact mortified. In the second case the membranes of the artery are modified by the action of the chemical agent, but this modification is much less intense, and does not amount to disorganisation. The epithelium and the internal coat are destroyed; the middle coat, having lost its contractile properties, yields to the impulse of the liquid, and dilates; its circular fibres are easily seen upon the inner surface of the vessel. This condition is accompanied by yellowish discoloration of the fibres of the middle coat, and by their adherence to the clot. It may be asserted, that the injection of the perchloride of iron into an artery is always followed by these modifications:—

1st. The formation of a clot.
2nd. Modifications in the organisation of the arterial tunics.

The clot offers different characters, according as produced by an injection of the perchloride at 45°, 49°, or 30°. In the first case it is compact, homogeneous, and formed in totality of altered blood; in the second, it is formed by a mixture of blood, altered by the salt of iron enveloped in a large quantity of normal fibrine. These primary clots are followed by the formation of two others, one on the side of the heart, the other towards the periphery.

The coats of the artery present very important modifications in their organisation; whenever the experiment is made with perchloride at 49°, they become disorganised; they are reduced to the state of foreign bodies, and require to be cast off. But if the experiment is made with perchloride of 15° to 30°, the changes are of quite another character. The middle coat becomes hypertrophied, contracts adhesions with the clot, which it tends to encyst in the cavity of the vessel. The external coat is infiltrated by a fibrinous matter, plastic lymph, which may extend for some distance. After these first formations, there is established in the diseased structures a process of elimination and repair. The process of elimination takes place when both artery and clot are disorganised; they soften and are cast off. These changes may extend to some distance, when the feeble connexion between the coats of the vessel and the secondary clots gives way, and fatal hæmorrhage ensues. The work of repair is established when both clot and arterial tunics are completely organised. The clot may soften without decomposing. But when the process of repair goes on favourably, it becomes encysted in the vessel, adheres intimately to the artery, and obliterates its calibre. As these phenomena proceed, both the plastic formations and the secondary clots disappear.

The injection of the perchloride of iron into an artery may, therefore, give rise to two classes of phenomena, primary and secondary.

The primary phenomena are:—

1. The formation of primary and secondary clots.
2. The infiltration of plastic lymph into the sheath of the artery, and adherence of the clots.

The secondary phenomena are:—

1. The elimination of the disorganised parts.
2. Hypertrophy of the middle coat.
3. The encysting of the clots.
4. The disappearance of the secondary clots and of the plastic formations.
5. The occlusion of the artery.

The conclusions to which Dr. Giraldès arrives are:—

1. The perchloride of 49° to 45° should not be employed either in aneurisms or in erectile tumours; its use may be followed by serious accidents.
2. In aneurisms and in erectile tumours, both venous and arterial, the perchloride should be either of 30° or 20° areometer of Beaumé, in the proportion of 5 drops of 30°, 10 drops of 20°, for a quantity of blood equal to 3 cubic centimetres.
3. The perchloride of 15° to 49° may be used as a hæmostatic to stop deep hæmorrhages, or secondary hæmorrhage after operations.
4. The perchloride of 15°, 20°, or 30° may be advantageously employed in hæmatic cysts, especially when they occur in the neck.
5. In certain cases, the perchloride of 30° to 49° may be employed to modify the condition of wounds in suppuration.

3. *A Mew Method for the Extraction of Foreign Bodies from the Ear.*

Dr. Pirondi, surgeon-in-chief of the principal hospital of Marseilles, reports in the *Revue Thérapeutique du Midi*, a case in which he succeeded in removing an ivory button from the auditory meatus by a new method, after the usual means of extraction had been employed in vain.

The manipulations of the patient and his friends had produced great inflammation of the auricular orifice, and the swollen integument of the meatus formed a sort of valve external to the foreign body, preventing the application of forceps, or the curette, or the ingenious canula of M. Vidal. Under these circumstances, Dr. Pirondi bethought himself of a simple plan for the removal of the foreign substance, which proved successful. He adjusted the long gold canula to an Anel's syringe, and carrying it along the floor of the canal, was enabled to introduce its point, which is not much greater than a bristle, between the integument and the button; he then pressed gently on the piston; a drop or two of water was forced behind the button, and thus by hydraulic pressure the foreign body was brought away.

Dr. Pirondi does not hesitate to advise the general employment of this procedure. We should fear, however, that in those cases in which it would be necessary, that is, in cases in which foreign substances are firmly impacted in the auditory canal, the membrane of the tympanum would be more likely to give way than the foreign body to be dislodged. O.

4. *Treatment of Fractured Patella by a Gutta Percha Knee Cap.*

The great difficulty in securing co-aptation of the fragments in cases of transverse fracture of the patella is generally acknowledged, and many contrivances have been used to obviate it. In a case of this kind, recently under his care in St. Thomas's Hospital, Mr. Le Gros Clark employed with great success a novel and very simple expedient. It consisted of a cap of gutta percha moulded to the front aspect and sides of the joint, and with a hole cut in its centre large enough to receive the patella. The two halves of the broken bone having been by manipulation brought into apposition, this splint, lightly padded with lint, was placed over them and confined by means of a bandage. Its influence was thus, by pressure from above and below, to keep the fragments in exact position. The case in which the plan was adopted did remarkably well, and after the first reduction no trouble with subsequent displacements occurred. It is of course advisable to adopt the ordinary measure of flexing the thigh as much as possible on the pelvis during the treatment, and with this view, in the present instance, the leg was swung by a broad suspensory bandage passed beneath the calf, and fixed to the curtain-pole of the bedstead. The cap was not applied until the tumefaction following the receipt of the injury had subsided. The above accident occurred to a female. A similar case of transverse fracture of the patella in a man, is now under the same treatment in the Hospital, under Mr. Le Gros Clark, and promises an equally favourable result. The application of this simple apparatus has not been attended by any inconvenience in either case.

5. *New Operation for the Radical Cure of Hernia.* By M. MAISONNEUVE.

One of the most noted characters flourishing at the present time, in the Parisian surgical world, is Maisonneuve, one of the surgeons of the Hospital Cochin. In the midst of that crowd of brilliant and bold operators, he has obtained the reputation of being the most successful and daring innovator upon the orthodox rules of surgery, and the most original and dexterous manipulator in Paris.

As a specimen of his inventive genius, we call the attention of our readers to the following abstract of his new operation for inguinal hernia.

A young man aged twenty-two, afflicted with inguinal hernia for several years, and for which various bandages has been applied without success, entered the hospital under the care of M. M., anxious to submit to any treatment likely to relieve him of his infirmity. The hernia was a direct inguinal one, incapable of being retained by any means. In these circumstances, the patient was submitted to the following operation on the 28th April:—The patient was placed on his back, and brought under the influence of chloroform, and the operation performed in the following manner. By means of the index finger of the left hand, he pushed, as one would do the finger of a glove, a portion of the skin of the scrotum into the inguinal canal, and then so far into the abdomen, till the end of the finger could be felt through the abdominal parietes, about three centimetres beyond the canal. (1er temps.) The operator next, by means of a bistoury in his right hand, made a longitudinal incision of about 1½ centimetres in length, through the abdominal parietes resting on the end of the finger. This incision included the skin, cellular tissue, abdominal muscles, and peritoneum, (2me temps.)

The skin of the scrotum was now pushed through this opening by means of the index finger, and being thus made to protrude, was divided longitudinally to the extent of two millimetres. (3me temps.) Two needles, each armed with a single thread, were immediately passed through the one and the other lip of this small incision, which was then enlarged to the extent of a centimetre, so that the finger of the operator passed through it. M. M. now finished the operation by uniting, by means of the needles, the edges of the scrotal incision with that of the abdominal one. Ten sutures were then used in order to give the union the desired solidity.

The operator now withdrew his finger from the kind of finger of a glove which he had pushed before him, and which was now transformed into a canal, open above at the abdomen, and below at the scrotum. No accident interfered with this first act of the operation. Re-union was completed without difficulty, and so soon as the 8th of May, M. M. commenced to cauterize with nitrate of silver, and nitric acid, the cutaneous canal which obstructed the herniary one. At last, on the 18th May, when the cauterizations had produced the complete destruction of the epidermis in the course of the canal, M. M. completed his operation in the following manner. He incised the skin of the scrotum around the species of funnel which was formed inferiorly towards the scrotum, which caused the tension to which the pushed up skin was subjected to cease, by permitting it to remount into the canal. Lastly, the vast circular wound resulting from this incision was reunited by means of suture, so that, with the exception of a linear cicatrice, the scrotum shews, at present, no traces of the operation.

As to the result of the operation, it is as perfect as possible; the hernia no longer exists; the scrotum preserves its form and normal disposition; and of the whole of this operation so formidable in appearance, there rest but a few almost imperceptible traces.—*L'Union Médicale*, 8*th June* 1854.

6. *Aneurism of the Temporal Artery— Radical Cure by Injections of the Acetate of Iron.* By Dr. PAVESSI, of Milan.

At page 76 of the present volume, we mentioned the researches of Ruspini, a pharmaceutist of Lombardy who believes that he has found in the *acetate* of the sesquioxide of iron, a salt which possesses equal coagulating power with the perchloride, and is less likely to do mischief. We related, also, the first (and successful) instance in which this agent has been employed in the treatment of aneurisms.

In the *Journal des Connaissances Med. Chir.* for June 12th, Dr. Pavessi reports a second successful case:

> A young man in the Fauburg Palazzo, had an elastic pulsating tumour over the course of the temporal artery, measuring an inch and a half in circumference. There could be no doubt of the nature of the tumour, and, as the young man earnestly desired to be rid of it, Dr. Pavessi determined to operate by the method of Pravaz. The tumour was punctured; a jet of arterial blood escaped: Charrière's aneurism-syringe was adjusted, and *sixteen drops* of the solution of the acetate of iron was injected. The pulsation ceased immediately; there was no subsequent inflammation. The operation was done on the 24th of January; by the first of March, there were left scarcely any traces of the tumour.

Such is Dr. Pavessi's brief statement, and we trust that it is not exaggerated, and that he had really to do with an aneurism, and not an erectile tumour. O.

OBSTETRICS, &c.

1. *Discussion at the Imperial Academy of Medicine on the Treatment of Displacements of the Uterus by Intra-uterine Pessaries.* Report of M. DEPAUL. Remarks of MM. VELPEAU, MALGAIGNE, CAZEAUX, AMUSSAT, RICORD, DUBOIS, JOBERT, &c.

This brilliant debate, which caused an extraordinary sensation in the Academy of Medicine, was originated by Dr. Broca, who detailed a case from his own practice, where death had followed the use of the uterine catheter. M. Cruveilhier related another fatal case, and declared his strong opposition to the use of uterine instruments. A committee was appointed by the Academy, and their report drawn up by M. Depaul, who, after entering at great length into the whole subject, condemned in most severe language the use of the intra-uterine pessaries and bougies. We will offer to our readers a very brief account of the cases, the report, and the discussion which ensued.

Cases of MM. Broca and Cruveilhier.

Broca's case was that of a woman aged 39, the mother of three children, who for a twelve month had been suffering with suppressed menstruation, pains in the thighs, disorder of the digestion, obstinate constipation, and frequent calls to make water. On examination a very marked antiversion was detected, the cervix was enlarged and granular, with a glairy discharge from the os. On the 7th of October, the uterine sound was introduced; it reached to 6½ centimetres. The uterus was brought into position and kept there for five minutes, without causing any pain. This operation was repeated on the 8th and 10th, the patient declaring herself better. On the 11th slight pain was felt on the introduction of the sound; the pain became more intense on the 12th, and was followed by fever, nausea, vomiting and constipation. The attacks of pain became more frequent, the pulse small, the abdomen tympanitic, and the patient died on the 23d. *The Autopsy* disclosed remarkable adhesions of the intestines to the abdominal parietes, and at about sixty centimetres above the ilio-cœcal valve *the intestine was adherent to the uterus,* greatly distended above and contracted below that point. Besides the old adhesions, there were recent ones not yet organised, in short, there were the evidences of two attacks of peritonitis, one of old and the other of recent date. The right Fallopian tube was dilated and attached by old adhesions to the uterus and rectum. It contained a considerable quantity of pus. At the angle of the uterus near the insertion of the tube was a collection of pus.

M. Broca believed that the introduction of the sound caused metritis and peritonitis, and that the recent, added to the old adhesion, had completed the intestinal obstruction. M. Valleix, however, contends that this contraction pre-existed before the introduction of the sound, and was not dependent on its use.

M. Cruveilhier's case was that of a young woman, aged 24, who had been married four years and was barren, which was attributed to a slight anteversion of the womb. She came up to Paris to place herself under the care of M. Valleix. The sound was introduced five times in one month, but could never be retained long, because of the sickness, distension of the abdomen, and severe pain which it produced. She returned home sick; M. Cruveilhier recognized metro-peritonitis. In a week after, the patient died.

M. Valleix considered the patient tubercular, and thought that she sank under tubercular peritonitis.

M. Depaul's Report.

M. Depaul in his report, which is of great length, undertakes to prove, that uterine affections are too often attributed to displacement, when they really arise from pathological conditions of that organ; that even in displacement, we possess a more rational method of treatment than the intra-uterine pessary; that the facts adduced to shew the efficacy of these instruments are not satisfactory. Whereas, there are numerous facts proving that the most formidable affections, and even death itself, may be the consequence of their employment.

The reporter alludes to the two kinds of instruments in use for uterine displacements—the uterine sound of Simpson & Kiwisch and the intra uterine pessaries of various kinds, also known as Simpson's & Kiwisch's, although the original idea has been claimed for Amussat and Velpeau. The sound which he declares had been long used by Recamier and Amussat, is considered of undoubted service in diagnosis, and may be usful in restoring the uterus to its normal position; the strictures of M. Depaul are principally directed against the pessaries, although he considers the use of the sound as not without danger.

The next object of the report is to prove that uterine displacements do not produce the mischief which is attributed to them. More than half of the sex are subjects of them; their influence has been greatly exaggerated, and the symptoms attributed to these deviations are the result of other pathological conditions. In pursuing this argument, the reporter gives to the 180 cases of M. Valleix, a severe analysis. He shews that these cases are inconclusive, and may be turned into evidence against the treatment they are intended to support. With regard to Dr. Simpson's practice, he was unable to give the results, as that gentleman, when applied to, communicated only assertions without proofs.

M. Depaul next proceeds to shew the danger in the use of the intra-uterine pessary. Drs. Churchill, Ashwell and Graves are quoted, and Dr. Robert Lee's case, where the "impaling machine" was extracted from the uterus. Strong evidence is adduced to shew the unfavourable estimation in which the practice is held by eminent obstetricians.

Many like objections are brought forward against the use of the uterine sound. According to Depaul, it is not often necessary in diagnosis, and is not exempt from serious danger. Cases of fatal peritonitis, abortion and death, are derived from the reports of Gueneau de Mussy, Huguier, Nonat and Valleix, and the report concludes by declaring that the efficacy of the mechanical treatment could not be proved; that the pessary gave rise to dangers of the most alarming kind, and that the sound, though of advantage in the diagnosis of certain affections, from the great risks attending its use, should be reserved for the exceptional cases which require it.

Discussion in the Academy.

M. Malgaigne, while admitting the zeal and talent of the reporter, regretted to find so much party spirit in it. He believed that in some cases, the intra-uterine pessary might be useful. He had often witnessed cases of descent of the uterus, where the use of the pessary had put a stop to all the symptoms. *The hypogastric belt*, also, by replacing the uterus, had often produced the same beneficial results. The important point was to establish a differential diagnosis of uterine affections; whether the symptoms should be ascribed to displacement, to *engorgement*, to granulations, ulcerations, &c. In short, the intra-uterine pessary should not be entirely rejected, but its use should be confined to cases without inflammation, acute or chronic. The instrument should be used cautiously, and not be permitted to remain permanently, and above all, the treatment should be controlled by the rational indications.

M. Huguier was a member of the committee, but did not sign the report. He believed that intra-uterine pessaries were sometimes useful in cases of displacements, and especially commends their efficacy as emmenagogues, when other means had failed. He considered uterine displacements curable, and closed his able address by describing his method of replacing the uterus when retroflexed, *by inserting pledgets of lint in the rectum.*

M. Hervez de Chegoin was of opinion that uterine displacements gave rise oftentimes to distressing symptoms, which were relieved by replacing the organ. This result, however, should be accomplished by *pessaries external to the uterine cavity.* He considered that the intra-uterine pessary should be dismissed from practice.

M. P. Dubois did not believe that the pessaries of M. Chegoin ever would replace a retroflexed womb. He considered the intra-uterine instrument could effect that object temporarily; and the principal question was, are they without danger? Although but temporarily replacing the uterus, they would alleviate and sometimes cure by relieving the weight of the uterus and the tension of its ligaments, and *by the alteration of its morbid sensibility in cases of neuralgia.* Consequently the intra-uterine pessary should be retained in practice, not as directors of the position of the uterus, but as modifying agents which may be placed in competition with cauterizations, douches, &c. In all cases, the general treatment should be attended to as well as the local.

M. Cazeaux expressed his opinions at great length. He objected to the report as giving the unfortunate cases, and suppressing the successful ones. He believed that by removing the displacement, the symptoms and even the concomitant lesions might be cured, but differed with M. Dubois, in maintaining the efficacy of M. Chegoin's vaginal pessary in retroflexion. He considered inflexion to be a congenital condition in the child, thus adopting the opinions of Boulard, Follin and Verneuil. He was opposed to the use of the intra-uterine pessary, but thought the uterine sound a useful instrument.

M. Gibert maintained that too much importance had been attached to uterine diseases which often depended on constitutional conditions, and he mentioned instances, where erroneous and overstrained views had led to methods of treatment as harsh and dangerous, as they were useless and uncalled for.

M. Velpeau in one of the most important addresses delivered during the discussion, entered at length into the details of the question, and opposed in strong terms, the report. After passing a high eulogium on M. Valleix and his practice, he proceeded to say that the effects of uterine displacements were not exaggerated. He recognized the importance of replacing the organ, and rapidly reviewed the principal remedies, which he declared to be generally inefficient. In consequence of this conviction, he had long ago tried the intra-uterine pessary, but had deserted it more on theoretical than practical grounds. He now thought the dangers of these pessaries had been exaggerated, and confidently trusted to the experience of M. Valleix to disclose the advantages and objections to their use. M. Velpeau was of opinion that the conclusions of the report should be suppressed, and that the Academy could only act on the cases of MM. Broca and Cruveilhier.

M. Amussat said that the idea of introducing bougies (*tiges*) into the cavity of the uterus suggested itself to him in 1826, on seeing M. Recamier use the uterine sound for diagnostic purposes. One of the first cases in which he used the pessary, was that of a woman with anteversion. He introduced a pessary with an ivory stem, and allowed the patient to go about with the instrument in the womb. Inflammation supervened, and the woman died. Distressed at this mishap, he attempted to remedy displacements with extra-uterine instruments. He employed for this purpose, conical pessaries shaped like cupping glasses, but had to give them up on account of the pain they produced. Much discouraged by the results of instrumental treatment, he adopted the practice of *cauterizing the posterior part of the cervix*, that by the adhesions formed during the cicatrization of the sore, the displacements might be radically cured. He was led to this idea by noticing those spontaneous cures of uterine displacements, resulting from local inflammations and ulcerations, producing adhesions between the vagina and uterus, and he thus imitated nature. The results of this practice were very favourable, and M. Amussat related many cases. He did not think the cauterization of the anterior lip of the cervix so beneficial in anteversion, and in such cases, he used a pessary (*en gobelet*) to support the womb. In conclusion, he condemned the indiscriminate use of pessaries, more especially of the intra-uterine instrument, and declared his method of treatment to be free from danger and more successful.

M. Malgaigne again spoke at great length. He referred to what had been said by M. Dubois with regard to the frequency of neuralgia of the womb; for, although he had seen it, he did not regard it as common, but he bowed deferentially to the experience of M. Dubois. He maintained that the pain caused by pure displacements of the uterus would be relieved by the recumbent posture, and that this circumstance was pathognomonic of the affection. He looked upon the speculum as of little use in displacement, as he had known cases diagnosed by its use, as ulcerated cervix, and treated needlessly with cauterants. The suffering caused by displacement was by no means regulated by the extent of the deviation, but rather by the peculiar susceptibility of the patient. M. Cazeaux had said that congenital displacements were seldom the cause of pain, whilst those occurring accidentally always produce suffering. He could not see how the distinguished gentleman ascertained the difference, unless by asking the patient—" Madam, have you had this inflexion since your birth ?" The speaker then alluded to M. Velpeau's address, and closed his remarks by declaring his belief in the uncertainty of any permanent cure for uterine deviations. He believed that, in some cases, there was a spontaneous cure, in others, complete recoveries had been effected, but there was no certainty in any mode of treatment.

M. Ricord desired to make a few remarks on the treatment of certain hyperæsthetic conditions of the uterus consequent on displacement. He considered that much of Valleix's success was dependent on his isolating the uterus from its painful position without making pressure on the morbidly sensitive parts. He had invented an instrument which would isolate and support the uterus without entering its cavity or touching the vagina. This instrument was a forceps which was introduced by the aid of a speculum, and the points of which seized the cervix. By means of a ring moved by a screw, the uterus could be raised to any required point, and the whole apparatus was fixed by means of the plate (*plastron*) of M. Valleix's instrument.

M. Robert, being a member of the commission which brought in the report, made an address, which we can only notice very briefly. He did not think that the influence of uterine displacements had been exaggerated. He had for a long time been in the habit of using dilating bougies, without any bad result. He had also used Simpson's pessary. Although injurious results had followed the use of this instrument, he admitted that there were cases where all other methods failed, and this mode of treatment had been productive of lasting good. He thought it would be premature to exclude this instrument from practice.

M. Depaul, lastly, replied at great length to the numerous strictures on his report. He did not believe in M. Huguier's exceptional cases requiring the use of the intra-uterine redressor. As for its value as an emmenagogue, true, it produced a bloody discharge, but it was not the menstrual secretion, but a true hæmorrhage which had been mistaken for menstruation. He protested against the injustice of M. Cazeaux's accusation of having only reported the unfortunate cases. He knew of no successful ones. M. Cazeaux alluded to the catarrhs, granulations, ulcerations and neuralgias co-existing with displacement. There were the lesions to be attacked and relieved. He denied M. Cazeaux's statement that anteversion was the normal condition in children, and women who had not borne children. Intestinal expansion in the dead body might raise the organ, and so deceive observers. He regretted that M. Cazeaux had omitted to give the "proper precautions necessary to render uterine catheterism safe." He then asked M. Dubois if his statement was true, that the uterus was never permanently replaced by the use of instruments, where was the advantage of a dangerous attempt with the intra-uterine redressor? ("*Les redresseurs ne redressent pas.*") As for M. Malgaigne's hypogastric belt, he had been invited to see it applied in two cases at the Hopital St. Louis, and upon examination manually and by the speculum, he ascertained that ulceration existed in both cases, and although there was slight anteversion in one instance, in the other, there was no displacement at all. He agreed with his learned master, M. Velpeau, as to the scientific attainments of M. Valleix, but he did not approve of his practice. Velpeau declared that the great difficulty was in applying the instrument, but he (M. Depaul) thought that such men as Valleix, Huguier, Nélaton, Aran, &c., ought to be able to do it. What astonished him was that the uterus was so intolerant of a clot of blood or a small polypus within its cavity, and yet would bear with patience such an instrument as this. He closed his remarks by laying before the Academy the following conclusions, carried by a majority, with the exception of the third, in which M. Depaul said he was at variance with his colleagues:

1st. The cases reported to the Academy by MM. Broca and Cruveilhier, along with numerous others on record, prove that the use of the intra-uterine pessary may often occasion serious accidents, and sometimes even death.

2d. In the rare cases in which this instrument has appeared productive of advantageous results, it is not proved that it had always acted by replacing the uterus.

3d. In some exceptional cases where uterine displacements (deviations) have occasioned serious functional derangements, and where all known therapeutic measures have been tried in vain, the application of the intra-uterine pessary may be tried as a last resource.

4th. The commission has the honor to propose a vote of thanks to M. Broca, for his very interesting communication which has originated the late debates; and also to M. Cruveilhier.

The president put the first conclusion to the vote.

M. Velpeau.—This conclusion appears to me to have been adopted; but it is too severe. Instead of saying "the use of the intra-uterine pessary may *often*," I would substitute the words, "may *sometimes* occasion," etc.

The *President.*—It is proposed to suppress the adverbs altogether. It should be read :—" The use of the pessary *may* occasion," etc.

The President then put the first conclusion to the vote, with the word "*often*" suppressed. It was adopted in this modified form.

The *second* conclusion was carried unanimously, without any modification.

The *third* conclusion was then read, and M. Gibert demanded its suppression.

M. VELPEAU.—I insist on its being allowed to remain.

M. CAZEAUX.—I am convinced that the use of the intra-uterine pessary is always useless, and sometimes dangerous. I cannot adopt this conclusion.

The PRESIDENT.—It contains the words, "as a last resource." For this purpose we may try anything (*laughter*).

Several members proposed the suppression of the conclusion, and the President proposed to put it to the vote.

M. JOBERT requested the suppression of the words, "as a last resourse" (*comme dernière ressource*).

M. Velpeau supported this amendment.

The conclusion thus modified was put to the vote, and was rejected.

[Dr. Simpson intends in the next number of the Edinburgh Monthly Journal of Medical Science, to offer a commentary on this discussion, and to defend his pessary against the attacks made upon it. We may expect to see the hypogastric belt of M. Malgaigne, the caustics of Amussat, the forceps of Ricord, Huguier's pledgets (*meches*) of lint in the rectum, and Chegoin's pessary, as fiercely criticised as was the unfortunate intra-uterine instrument of Prof. Simpson.—ED.]

2. *A case of Arm-Presentation, in which Version was impossible.*

From an article in the *Journal des Connaissances Medico-Chirurgicales*, we learn that the profession in France is not exempt from those unjust legal prosecutions, which have latterly become so frequent in this country, and that there, as here, the physician after discharging his entire duty in those difficult cases which are sometimes encountered in practice, is liable to have his reputation and honour jeopardized, though he has committed no fault.

It appears that on February 26th, 1853, Dr. Thiaudière was called to assist Dr. Latreille, of Saint-Secoridin, who had been for some hours in attendence on a Madame Dessioux, who it was evident was unable to deliver herself without the assistance of art. In fact, the side of the child presented; the funis had descended, and one arm was disengaged as far as the shoulder. The child was lying crosswise, therefore, and the only means of delivery was by effecting version. Dr. Latreille had endeavoured to perform this manœuvre. He had brought down one foot, but he could not find the other foot, and without it the operation was impracticable. The efforts of Dr. Thiaudière to find the second foot were also fruitless. He persevered, however, as long as his strength permitted, and was then relieved by his colleague, until both of them were exhausted.

Dr. Thiaudière was reminded by these insurmountable difficulties of a case he had previously attended, in which a lady was successfully delivered of the first of two twins. The second fœtus presented an arm; version was attempted, but it was impossible to find both feet, and the child was mutilated and extracted by piece-meal. The mother died twelve hours afterwards.

In the present case, it was found that the cord was without pulsation, and it was determined to amputate the limbs. This was done, and then with the hand and with crochets, the accoucheurs endeavoured to extract the child. Their efforts were unsuccessful, and they left the patient in the charge of a midwife, and postponed further manœuvres until the next day.

On the next morning, Dr. Barrot arrived, and made a fruitless attempt to find the missing foot. At last, the head was reached by a crochet, and Madame Dessioux was delivered. She expired in the course of the day.

Two months afterwards, Drs. Thiaudière and Latreille were arraigned before the criminal tribunal of Poitiers to answer a charge of *homicide through imprudence*, preferred by M. Dessioux. Velpeau, Cazeaux, and Paul Dubois were consulted as experts. We should be glad to transcribe the whole of their testimony, but must be satisfied with a condensation of it.

M. Cazeaux certified that after considering with the closest attention the facts relating to the death of Mad. Dessioux, he was satisfied that her obstetrical attendants had shown incontestable proofs of their knowledge and conscientious devotion.

"The difficulties which they encountered," continues M. Cazeaux, "are unhappily but too frequent in that unfortunate presentation, and it must be frankly confessed that the majority of such cases terminate fataliy."

"I declare as my opinion that it was right, as was done, to attempt in the first place to turn the child; secondly, this being rendered impossible by the violence of the uterine contractions, to mutilate the child after ascertaining that it was dead."

In reply to judicial enquiry, M. Cazeaux states that he considers it perfectly proper in Drs. Thiaudière and Latreille to confide their patient during the night to the midwife, as repose was necessary for her. He and Professor Dubois had pursued the same course on a similar occasion.

As to the amputation of the arm, it was not indispensable, and should not be practiced on a living child. When the interests of the mother alone were to be consulted, however, the accoucheur had a perfect right to remove whatever he considered an obstacle, and if the swollen arm was in his way, it was right to amputate it; for, in many cases, this operation would render version easier. M. Cazeaux concludes by expressing his "entire approval of the conduct of the honourable Drs. Thiaudière and Latreille."

Velpeau subscribed to M. Cazeaux' opinion.

Paul Dubois gives his opinion at great length. He remarks that the accusation was based on two facts which were supposed to constitute an infraction of the precepts of art, and a grave imprudence:—that unnecessary and dangerous mutilations had been practiced, and that the woman had been abandoned when in need of medical superintendence.

"It is true that in the majority of cases of presentation of the trunk, complicated with descent of one or more of the limbs, the ablation of these parts is condemned as cruel when the child is living, and as useless when it is dead; but no experienced accoucheur pretends absolutely to proscribe such operations in the lattter of these conditions. It is certain, in fact, that they may facilitate manœuvres for the extraction of the child, and an attentive consideration of the facts authorises me to say that they might do so in the circumstances which give rise to the present prosecution."

Professor Dubois goes on to justify the temporary absence of Drs. Thiaudière and Latreille, and to express his conscientious conviction that they faithfully obeyed the precepts of science and christian charity, and displayed knowledge, and skill, and zeal in attempting to triumph over difficulties which were unhappily insurmountable.

After these representations the tribunal of Poitiers put a stop to the proceedings against Drs. Thiaudière and Latreille.

With all reverence for the eminent personages whose opinions we have related, we would suggest, that the proper practice in the case above related, would have been to produce relaxation by anæsthetic inhalations, which, if persevered in, will inevitably suspend uterine action. The difficulty in effecting version in this case depended not less on the violent uterine contractions, than on the position of the fœtus. Dr. Thiaudière says that the womb "crushed his hand like a vice." M. Cazeaux admits that this was the difficulty, but he does not propound what appears to us the logical consequence of such an admission. In support of the opinion that we advance, we may mention that Dr. Seager, of Springfield, Mass., lately informed us, that in a case of twins in which version was necessary, he found difficulty in effecting this operation in consequence of the strong contractions of the womb, but having administered ether freely, the uterine efforts were suspended, and the desired manœuvre was practiced with the greatest facility.

O.

MEDICAL JURISPRUDENCE.

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1. *The Medico-legal importance of cicatrices.* By M. Schneider.

The appearance of cicatrices is important in medical jurisprudence, inasmuch as it depends on the nature of the injury received, and on the sort of instrument by which it was inflicted.

Cicatrices after incised wounds, when these have been properly treated and there has been no deep-seated suppuration, generally present a more or less rectilinear form. But the elasticity and stretching of the skin, the convexity of the subjacent parts, and the softness of the cellular tissue, may change a rectilinear cicatrix into an elliptic, or even into a circular one. *Cicatrices from stabbing instruments* are often of a triangular form. Those from *gun-shot wounds* are generally of a rounded or grooved character. If the shot has been received from some distance, there is a considerable mark (*scheibe*) with depression of the skin in the centre, and puckering at the margins; if the shot has been fired close at hand, the cicatrix is deeper, its edges are irregular, and it is of a bluish colour. In wounds of this description, also, the point of entrance of the ball is shown by a depressed, and the point of its exit by an elevated, cicatrix. *Bruises*, when unattended with lesion of the integuments, leave no cicatrix; but when occurring with this complication, they leave cicatrices resembling those caused by incised wounds, or injuries accompanied with loss of substance. *Bites of mad animals* are distinguished by no peculiarity of scar. *Burns* of the first, or minor grade, leave no mark; those of the second grade occasion scars like those of blisters; those of the third grade cause white, glistening, and tolerably smooth cicatrices; and those of the fourth, or most severe grade, leave dense, hard, irregular, contracted cicatrices, with abnormal union of approximated surfaces, and very great retraction of the cellular tissue. *Fluid cauterants* give rise to superficial, and *solid cauterants* to deep circumscribed cicatrices, with contracted centres, and these may in certain cases be variously coloured by the chemical nature of the irritant substance. *Scrofulous ulcers* leave cicatrices which are irregular and furrowed, with smooth deep depressions, and surrounded by hard uneven margins. The *scorbutic cicatrix* is dark bluish-red in colour, soft to the touch, somewhat elevated, and rather painful; in course of time it becomes flatter, of a reddish-brown colour, approaching to green in the centre, and very thin and easily injured. *Arthritic scars* are of a reddish-brown, a bluish, or an ash-grey colour; they are studded with elevations and depressions; while their circumferences are dark brown, varicose, and often inflamed and erysipelatous. *Herpetic cicatrices* are wider spread, irregular, superficial, and of a dirty reddish-brown colour; in the centre they are often of the same colour as the old skin, and they gradually merge into the surrounding integuments. *Syphilitic cicatrices* are characterised by great loss of substance; they approximate the lips of the deep ulcers before their granulations have had time to reach the surface. *Glandular cicatrices* are irregularly tumified; generally deep, hardened, and of a reddish brown colour. The cicatrices of *true small-pox*, are flat, and irregular, with indented margins, giving to the surface the appearance of a citron; while those of *pseudo-variola* have smooth even borders, and have hairs growing in them.

As regards the *age of a cicatrix*, we must be guided by its colour, size, and thickness, in forming our opinion. The fainter its colour, the larger its extent, and the greater its sensibility and tenderness, the more recent is its formation, and the more imperfect is its organization. As its age increases it grows smaller, thicker, more shining, and less sensitive.—*Prag. Vierteljahrs. Bd.* ii, 1854.

2. *On Bloody Foot-marks, and their mode of Mensuration.*

Dr. Caussé of Albi has carefully investigated thissubject, which is one of much importance, though, in our standard works on legal medicine, it has hitherto received little attention. The problem with regard to marks made by shoes or wooden clogs is, according to our author, sufficiently easy; and he affirms that it is neither the length nor breadth of the foot which offer the principal points of interest, but peculiarities observed on the shoe itself. Dr. Mascard, in a communication to the Académie Royale de Médicine de Belgique, has stated that the impress left on the earth is smaller than the foot which made it; but M. Caussé, on the contrary, is of opinion that the reverse is true, and that the greater or less consistence of the soil makes these impresses vary infinitely. Such foot-marks can now be easily preserved by the process recently described by M. Hugoulin of Toulon, who employs for the purpose stearic acid reduced to the state of an impalpable powder. (See *Annales d'Hygiène*, etc., t. xliv, p. 429.) Foot-marks on snow have hitherto proved the only exception to the success of the process; but M. Hugoulin is busy with a series of experiments, and he confidently expects to be able to fix them as completely as the others. Our author more especially addresses himself to the consideration of bloody foot-marks on the floors of apartments, whether tiled or otherwise; and has the undoubted merit of having been the first to publish on the subject. He establishes general differential characters between, 1, the foot of a man; 2, that of a woman; 3, that of an adult; 4, the flat foot; 5, the foot with a strongly marked instep, whether accustomed to the use of shoes or otherwise; 6, the long straight foot; 7, the broad foot; and lastly, the foot marked by some deformity. The impresses left by all of these, after having stepped on blood or other fluids, are very different, and can be submitted to examination of mathematical exactness by our author's mode of measurement, which consists in drawing a line along the inner side of the foot, tangent to the curve formed by the internal aspect of the heel and the projection inwards of the metatarso-phalangeal articulation of the great toe. This line is then to be divided into as many equal parts as we may desire, and from these we draw perpendiculars across the foot; thus dividing the object of our examination, whether a naked sole, an impression on earth, or one of blood upon the floor of an apartment (like a picture about to be engraved), into a number of parts so small as to admit of easy comparison with others and careful examination. By this simple method, M. Caussé affirms we are enabled to establish a striking identity, by means of a mathematical demonstration, between the foot-prints of the victim and the accused, or the fact of a struggle having occurred, or the presence of one or more assassins; whether a man or woman committed the deed, or whether the assassin was accustomed to the use of shoes, or possessed a flat foot, one with a high instep, or one marked with any deformity. Illustrative cases are cited, where this plan was followed, and the results of examination borne out by subsequent disclosures. The difference that must subsist between the impress made by a flat foot or one with a high instep needs hardly be insisted on; in one, the impress is large, regular, and broad; while the other is narrow and contracted in the centre. The angle formed by the metatarso-phalangeal articulation of the great toe is also very prominent in certain persons, and a lateral deviation of the toe is the result, which is of importance in studying different foot-marks. This change is commonly observed in old people, and in those habitually using pointed shoes, in whom of course the impress made by the toe lies out of the line (described above) drawn along the internal edge of the impression. In the well formed adult, on the contrary, and the man of middle age, the impress of the big toe will either be traversed by that line, or will closely approach it. Again, the second toe is generally of equal length with the first; in some persons, however, it is separated in a remarkable manner from the first, while in others it is found closely applied to it. The line formed by the united toes also varies much in different individuals, and presents an anterior convexity, or, it may be, a slight concavity. It is of importance to mark the form of the space which is left by that portion of the toes which does not touch the ground; it is in some cases triangular, and in others presents various figures. Finally, the foot may present some deformity which must be carefully noted. Should the impression submitted to examination appear to have been made with extra force, of course, in testing the foot-prints of those suspected, we shall take care that similar conditions be observed. By way of caution, M. Caussé relates that considerable uncertainty for some time attended the investigation of a case of suicide, which, in consequence of a practitioner, who was summoned on its discovery, inadvertently stepping on the blood, and leaving his foot-marks over the apartment, was considered to be one of homicide.

3. *Case of Apparent Death.* M. ANCELON.

On the 24th December 1830, M. Ancelon was sent for in great haste to visit a person about eight miles off. On arriving he was informed that the patient, a woman 34 years of age, had been dead for more than half an hour. On examination no signs of respiration could be detected,—the pulse could not be felt, the surface was livid, the belly soft and placid, and the extremities cold. On being informed that the woman had been suffering from uterine hemorrhage for a length of time, and that it had continued up to the moment of her death, M. Ancelon made a vaginal examination. He found in the neck of the uterus the head of a fœtus of four months old, the soft parts were entirely absent. At the moment that he touched the head of the fœtus the midwife thought she perceived a bubble of air at the woman's mouth. Encouraged by this appearance, M. Ancelon proceeded to disembarrass the uterus of its putrefied contents, and in proportion as he advanced in this the woman appeared to be restored to life. The respiration, manifested at first by air bubbles which succeeded one another on the lips, and then the circulation became established with extreme slowness. She did not recover her intelligence for more than three days. During this time frequent injections were employed to clean out the putrid matters from the uterus, and ammonia was administered internally. During convalescence she suffered much from an immense number of abscesses over the whole body. Eighteen months afterwards she was delivered of her tenth child.—*Bulletin Général de Therapeutique, November* 15.

THERAPEUTICAL RECORD.

Anasarca.—The flowers of the common broom, *spartium scoparia*, recommended by Rayer in albuminous nephritis, has been successfully used by Dr. Garcia T. Alvarez, and reported in *El Siglo Medico* for February 1854. In a man of 40, a severe attack of general anasarca, consequent upon this disease, was cured by the employment of an infusion of the flowers of scoparia until the urine gave no longer an albuminous reaction.

Cardiac Dropsy.—We remark in a late number of the Medical Times and Gazette a revival of the suggestions of Dr. Thémont many years ago as to the diuretic virtues of the common oat. Recent observations have verified these statements, and there can be no doubt that the decoction of oats does possess diuretic properties. The mode of preparation is to take two handsful of common oats and boil them in a quart of water for a quarter of an hour. Of the strained decoction a cupfull should be frequently given as an ordinary drink. Its simplicity and freedom from injurious consequences recommend it to the attention of the profession.

Chronic Rheumatism.—We remark amongst a number of reports sent in to the East India Medical board, that Dr. Foulis, of Mangalore, gives very favorable results from the use of the fish liver fat as an unguent in chronic rheumatism. Well rubbed in, night and morning, it had the effect of relieving pain and reducing swelling. Dr. Foulis adds: "In cases of atrophia, diabetes and scrofula, fish liver oil has been largely given, and attended with an amount of benefit truly surprising."

Diarrhœa in Phthisis.—There are often cases of consumption, in which we find irritability of stomach and bowels, inability to retain proper sustaining diet, and obstinate tendency to diarrhœa, to be the most troublesome symptoms met with in the management of that sad disease. As a nourishing article of diet, and one which might be used as a substitute to the cod liver oil, which the stomach under such circumstances always rejects, we would propose the emulsion of mutton suet in milk, and flavored with cinnamon. Fresh suet should be chopped fine, put into a bag and gently simmered for a few minutes in the milk, after which a quantity of cinnamon should be grated in. This preparation is always relished by the patient, and the bland and slightly aromatic mixture will oftentimes relieve the irritability, both of stomach and bowels, and add much to the general well being of the patient.

Fistula Ani.—An ingenious method of diagnosing in this affection is given by M. Limange, in the *Arch. Belgeš de Méd. Mil.* When the intestinal orifice cannot be ascertained by the ordinary methods of investigation, he suggests that a small quantity of the compound tincture of iodine should be injected through the external aperture of the fistula, while the finger of the operator is retained in the rectum. A permanent stain will thus be produced on the skin of the finger, by which the existence of an internal orifice is proven, and also a very correct idea is afforded of its situation and its distance from the outlet of the bowel.

Icthyosis.—Professor Hebra, of Vienna, reports in the *Zeitsch. der Gesellsch. der Aertre zu Wein*, two cases of icthyosis, occurring in boys who had laboured under the disease from infancy. Rubbing with *sapo viridis*, and the use of woolen clothing removed the affection.

Local Hemorrhages.—Dr. Bayer, of the Brighton Dispensary, proposes a new form of astringent application, which is worthy of attention on account of its elegance and convenience. We obtain our information from the Association Medical Journal. Dr. Bayer states that pure glycerine will dissolve nearly its own weight of tannin, and forms a very powerful local astringent application, the strength of which may easily be graduated, as it is readily miscible in water. The solution of tannin in glycerine is peculiarly applicable to many disorders of the mucous membrane, as it readily combines with the mucus, and forms a non-evaporisable coating over the membrane. It forms a most convenient application to the vaginal, uterine, rectal or urethral membrane where a strong and non-irritant astringent lotion is desired.

Orchitis.—In the *Journal de Bordeaux*, for March 1854, three cases of orchitis are reported by Prof. Costes, treated successfully by the application of collodion. A mixture was made of twenty parts of collodion to six of castor oil, which was rubbed over the scrotum and was followed by disappearance of both swelling and pain.

M. Velpeau, in the *Gazette des Hopitaux*, recommends the use of collodion in a somewhat analogous pathological condition. He states, that in the engorgement of the testicle, following on the injection of the tunica vaginalis for hydrocele, he has lately been using the collodion as a remedy. Four or five patients at La Charité were treated in this way, and the duration of the inflammatory engorgement was sensibly lessened.

Scrofulous Intolerance of Light.—The use of coniin in the more inflammatory blepharospasm of scrofulous children is suggested by Prof. Mauthner, in the *Jour. f. Kinderkr.* prepared by the following method. The coniin is to be mixed with the oil of sweet almonds, in the proportion of half a grain to one drachm. A thick fluid is formed, with which the lids may be daily pencilled. In eight or ten days this troublesome condition ceases. Hard glandular swellings of the neck bear this application better than salves composed of iodine.

BIBLIOGRAPHICAL RECORD.

I. *Principles of Comparative Physiology.* By WILLIAM B. CARPENTER, M. D. A new American from the fourth and revised London edition. Philadelphia: Blanchard & Lea. (From A. Morris.)

There are two classes of workers in the great field of intellectual exertion—those who originate and those who classify and arrange, and the complete science is the result of their joint labors. The first order comprises the theorists, the experimenters, the visionary enthusiasts, oftentimes, they who strike right and left, many fighting blindly in the dark, but all groping after the coveted truth which sooner or later becomes their captive. The other class stand aloof from the fierce struggle, and with calm mien and thoughtful eye, look on the active warriors engaged in the arena, and as the scattered pearls of truth drop, one by one, and are almost lost in the dust and smoke of the combat, they carefully pick them up, and weave them into a brilliant diadem to crown the infant science.

Of the two classes of literary labours which we have under consideration, it is difficult to determine which are the most successful. We are apt, at first, most to admire the active combatant; the brilliant theory or startling discovery strikes the world with astonishment, whilst the less noisy and conspicuous "compiler," as he is sneeringly called, is passed contemptuously by; but time produces in these things a marvellous change, and when we gaze on the symmetrical architecture of some attractive science; when we mark how carefully every stone has been selected, and placed just in the position best suited to it; as we we look at the completeness of all its parts, we forget the thousand workmen who labored on this edifice early and late, who collected the materials and hammered out its details, and think but of him who arranged and moulded these scattered fragments in harmonious unity.

These thoughts have been suggested to us by the receipt of a presentation copy of a new edition of Carpenter's Comparative Physiology, from those well known publishers, Messrs. Blanchard & Lea. The distinguished author has found it necessary, from the immense mass of material accumulating in his hands, to present in a separate work his principles of comparative physiology, whilst he promises to reproduce the general physiology of his former edition in a more complete form.

Dr. Carpenter, like our own Dunglison, belongs rather to the latter class of literary men of whom we have been speaking. Although not without originality, yet his principal reputation depends upon his powers of arrangement and classification, of sifting the wheat from the chaff, and of discriminating between the wild vagary and the valuable truth. Here his great erudition is brought favorably into play, and his habits of patient thought and calm investigation are made useful. He is one who mostly builds with the materials furnished him by others; as for instance, in the work before us, he refers to the names of more than two hundred and fifty authors, and investigators in the boundless field of physiology. Hence he assumes as his motto the maxim of Sir John Herschell: "Science is the knowledge of many, orderly and methodically arranged and digested, so as to be attainable by one." Although such men may now be called mere compilers and second hand book makers, the time will be, when the names of the many experimentalists and theorists will be only remembered by the few, whilst he who constructs out of their labors the perfect science, will be treasured in the heart of every student.

II. *A Clinical Introduction to the Practice of Auscultation, and other Modes of Physical Diagnosis, in Diseases of the Lungs and Heart.* By H. M. Hughes, M. D., &c., &c. Second edition. Philadelphia: Blanchard & Lea. (From J. W. Randolph.)

Auscultation and Percussion. By Dr. Joseph Skoda. Translated from the 4th edition, by W. O. Markham, M. D., &c., &c. Philadelphia: Lindsay & Blakiston. (From J. Woodhouse.)

Anything new or very important is hardly to be expected now in works on physical diagnosis. The whole subject has undergone the most searching investigation. When the principles of the science were conceived of and ascertained, its great importance to the practitioner was so obvious that its early advocates were led to such a rigid scrutiny, with regard even to its minute details, that but little was left to be culled by those coming after them. Conciseness and perspicuity are, therefore, the most desirable qualities of a book upon the subject.

These characteristics, we believe, are eminently possessed by the work of Dr. Hughes. It has long been a favorite with teachers and students. The work before us is the second edition, which being called for at home has been reproduced in this country by Messrs. Blanchard & Lea in a very handsome style.

The work of Dr. Skoda embodies his clinical experience in the Vienna Hospital, where he has long enjoyed great celebrity as a teacher. It is a very important contribution to the literature of the subject, and contains many original observations and novel views on some of the most important points connected with these modes of diagnosis. It was our design to have entered at some length into the discussion of his views, and to have presented our readers with a critical analysis of the contents of his volume. The undertaking, however, we have been obliged to defer until a future number.

In the meantime we call the attention of our readers to both of the works, and recommend them to their perusal.

III. *Healthy Skin, a Popular Treatise on the Skin and Hair.* By Erasmus Wilson, F. R. S. Second American, from the Fourth London edition. Philadelphia: Blanchard & Lea. (From Geo. M. West.)

This well known author, whose admirable work on the diseases of the skin is one of the text books in the hands of every medical student, has, in the little treatise before us, somewhat unbent from the high position of a scientific teacher, and offers to the general public a work, which so happily combines the useful with the agreeable, as to make it alike fit to adorn the boudoir of the fine lady, and the library of the physician.

The subjects treated of in the book in question are, the skin, the hair and the nails. We feel satisfied that all classes of the community would be the better for an attentive perusal of the clear and simple statements of Dr. Wilson with regard to these important portions of the animal economy. The public would here learn that greasy pomatums, beautifying cosmetics, and patent nail cleaners, are all inventions of the wicked one, intended to deprive the lovely maiden of her flowing tresses, her bright complexion, and that most attractive of the female charms, a rounded, white and tapering hand. Then one and all, ye fair ones, who swear by Clirehugh's tricopherous, rouge saucers, and French white, come, and learn a useful lesson from our agreeable old doctor.

We have not space to make many extracts from this pleasant book, the whole of which we cordially recommend to the reader. Amongst other things which interested us during its perusal, was a notice of

Beau's theory of determining the period of occurrence, and also the period of duration of a disease, by observing the growth of the nails. According to him, the law of growth of the nails is the same in health and disease; but in the latter condition, the materials of growth are supplied by the blood in diminished quantity. Hence the portion of nail formed during the progress of the disease is thinner than that produced during health, and may be distinguished on the surface as a transverse groove. If the disease has been sudden, the groove will be abrupt, and *vice versa.*

> For example: a groove, or rather ledge, situated at the distance of eight millimetres from the edge of the root of the thumb-nail, or five from the free margin of the skin, is indicative of an attack of disease which commenced eight weeks previously; while the breadth of the groove being two millimetres would prove the disease to have continued for the space of two weeks. After five months, the thumb-nail ceases to be a telltale, on account of its entire growth in length being accomplished, and the vestige of disease consequently obliterated. The great toe-nail is now to be appealed to. At five months, the groove indicative of the above disease has advanced only five millimetres from the root, and is only just becoming apparent beyond the free margin of the skin, the breadth of the groove being only half a millimetre. In making these observations, M. Beau selects the thumb-nail and corresponding nail in the foot, because in them only he finds the appearances regularly present.

Having thus made our toe-nails serve as almanacs of disease, the ingenious author next proceeds to treat of corns, and shows us how to make use of them as chronicles of past occurrences. That corns were weather wise, sad experience had long taught us, but Dr. Wilson gives us a novel use to which we can put these curses of humanity, and we insert the passage in his own language:

> It will be apparent to every one, that if a shoe of a certain size be worn, and if this shoe, by its too small dimensions, and consequent pressure, occasion a corn, the corn, by increasing the size of the injured part of the foot, will necessarily increase the pressure on the already irritated skin. Pain and inflammation follow this injury, and the least mischief that can happen is the enlarged growth of the papillæ, more blood than natural being now habitually sent to them. But, on a particular day, when vanity triumphs over comfort, and the "light fantastic toe" has been more than usually wronged, blood bursts from the pores of the sensitive skin, and the next morning, when the corn is inspected, it has the character of a bruise. The doctor is sent for, a poultice put on, rest enjoined, and in a few days all is again well; too well, in fact, to allow experience even a whisper. A gay party again does slaughter on the unfortunate corn, but similar means restore it, as before. Now, I have had the opportunity of examining a corn which has been thus maltreated, and its section is precisely that of the geological section of a stratified mountain, stratum following stratum of various hues, from a delicate yellow to the deep black of dried blood, each black line being the chronological memorial of a white day in the possessor's existence.

In conclusion, we will say of this modest little volume, that it is replete throughout with the most useful information with regard to the general management of diseases of the skin, hair and nails, and gives in a pleasant and attractive form many valuable hints both for the professional and general reader.

IV. *Modern Treatment of Syphilitic Diseases.* By LANGSTON PARKER, Surgeon to the Queen's Hospital, Birmingham. Philadelphia: Blanchard & Lea. (From G. M. West.)

The practical experience of twenty years in the treatment of one disease, and that too of a man who has been during that long period the surgeon to a large hospital, and has in addition treated eight thousand cases of the malady in question in private practice, we say that the experience of such a man must be worthy of our attention and respectful consideration, and hence we took up this work of Mr. Parker, expecting to be amply repaid for the time spent in its perusal. We were not disappointed, for we find it throughout filled with useful and valuable points of practice, and whilst it has nothing original or brilliant to suggest, is eminently worthy a favorable consideration.

Dr. Parker takes middle ground between the mercurialists and non-mercurialists. Whilst he believes that many cases of syphilis in its primary stage are curable without the aid of mercury, and decidedly recommends that the effort shall under most circumstances be made to dispense with that drug, yet he declares that it is unfortunately but too often the case that we are forced to appeal to its potent agency, before we can eradicate entirely from the system this virulent poison.

We would especially notice the treatment of secondary and tertiary forms of syphilis by mercurial fumigations and mercurial vapor baths, as pursued by Mr. Parker. This old practice we know has fallen somewhat into disrepute, and we feel satisfied from our own experience that it is worthy of being again revived. The views of our author on this point are strong, and well supported by the success of his practice.

EDITORIAL AND MISCELLANEOUS.

Dr. Carter P. Johnson.

Our editorial columns, which are usually occupied by questions of a scientific character, or such as have some professional importance, we desire to devote, in this number, to a more mournful theme. We have a sad story to relate, a solemn duty to perform, and with a full heart, though feeble pen, we address ourselves to the task.

It was a bright and sunny day in the month of June last, when we bade farewell to our playfellow in childhood, our schoolmate and professional brother, Carter Page Johnson. It was on the eve of his departure for Europe to make a summer excursion. The desire long deferred, to visit the old country, its halls of learning, its hospitals and great public charities, to meet with those great names in our profession of whose works he had been a devoted student, was about to be fulfilled. We wished him God speed in his long journey, and so we parted, *forever.* The road he has travelled was long, so long that he will never return to us; the space he has passed over is illimitable, for he has gone from time to eternity; the far away country he has visited, is indeed "the bourne from whence no traveller returns."

We heard of him often during his absence, his meetings with Brodie and the English celebrities, and then his visits to Paris. His long cherished wish was fulfilled, and his time was too short to enable him to complete his intended tour; so short that instead of sailing on the 20th of September so as to be in his place at the opening of the college in which he held a chair, he determined to remain one week longer, carry out all his plans, and return well content to his home. But as the time approached, that unswerving conscientiousness which formed so large a part of our friend's character, overcame his determination. It was *his duty* to be in place when the college session commenced, and to that duty he sacrificed his pleasure, his life. He sailed in the steamer Arctic *for home,* his friends and kindred expect soon to see him, his motherless children eagerly await his return. "Why comes he not?" He has gone to his eternal home; in the ocean's deepest depths he has found his grave.

His friends still cling like the shipwrecked mariner to any hope. "He may be in one of the boats. He may yet be saved." We knew the man too well. *He never left the ship.* When woman cried for help, he sought not safety for himself; and when the ill-fated vessel sunk, with all its precious freight on board, he met his death with the same composure which marked his course through life, and the briny wave closed that day on no truer, nobler spirit than Carter Page Johnson.

Thus at the early age of 33, has our friend passed away, stricken down just when he had reached his greatest term of usefulness. With a mind not brilliant or showy, but sound, well balanced and correct, Dr. Johnson had been from early boyhood the patient student, the steady seeker after knowledge. He took A. M. at the University; he became one of the first graduates of the Medical College of this city; then its Demonstrator, and eventually was selected to fill the Chair of Anatomy and Physiology, vacated by the resignation of Prof. Wyman, now of Cambridge. The arduous struggle which every young physician has to make to obtain the confidence of the community he had passed through, and the universal sorrow which pervades all classes of our population, gives evidence of the high estimation in which he was held. In him too, our Journal loses one of its earliest and most constant friends. The few contributions which he had found time to make to our medical literature are mostly to be seen in our pages. In short, the character of Dr. Johnson in every relation of life, was impressed with the same high attributes. As a lecturer and writer he was plain, solid and sensible; as a physician, free from wild theory and disinclined to hazardous experiment, his judgment and accurate knowledge of his profession made him greatly esteemed; whilst the man was always the same, always frank, candid and reliable, depising all petty tricks to gain a factitious and ephemeral reputation, and marching straight forward to the high goal before him, depending alone on his own merits and his own noble character for success.

We have offered in these halting words an humble tribute to the memory of our friend, and we turn again to our daily duties and avocations with a saddened heart, and many a time when we falter in the struggle through life, and see our honest efforts eclipsed by some pretending charlatan or specious trickster, we will take fresh courage, and gain new hope, when we think of the man who lost his life, but did his duty.

Professor Séquard.

We are glad to inform the friends of the Medical College of Virginia that Mr. Patton, the president of the board of visitors, has received a communication from Dr. Séquard, declaring his intention to assume the duties of the Physiological chair in that institution at the earliest possible moment. He states that without some unforeseen occurrence, he will be in Richmond by the last of November.

We congratulate the Virginia profession on this valuable accession to their ranks, and think we may anticipate, from the well deserved reputation of Dr. Séquard, that he will add great strength to the faculty of our school, and materially aid in advancing the cause of southern medical education.

Our Fourth Volume.

With this number we close our third half-yearly volume, and as our subscribers may perceive, we have gained the object we desired to effect, which was to make our volumes commence in January and July, instead of April and October, as they were wont to do under the old arrangement.

We will therefore issue number one of the fourth volume on the first day of January next, and hope thereafter to place it in the hands of our readers punctually on the first of every month.

Letter from a Country Physician.

DEAR SIR:

In reflecting on the subject of uterine polypus, after a perusal of the interesting case of that disease, described by Dr. Madison in a recent number of your valuable journal, I called to mind an article by the late Wm. A. McDowell, of Fincastle, where that accomplished surgeon throws out a practical suggestion respecting operations for polypus, which, as I see by Brathwaite, has been lately announced by Professor Maisonneuve, of Paris, as an important innovation of his own.

You will find Dr. McDowell's complete essay in the first volume of the *American Medical Recorder*, for 1828. With your permission, however, I will cite briefly one of the cases reported in it:

D——, a negro, æt. 38, unmarried, who had borne a child 22 years before, was taken with flooding and labor pains on Sept. 30th, 1827.

On examination Dr. McDowell discovered that the vagina was occupied by a large fleshy tumour, projecting an inch from the vulva, narrow below, growing broader upwards, closely resembling, in fact, the tumour formed in procidentia uteri. There was great febrile reaction; the bowels had been costive several days, and, in consequence of the pressure on the urethra, no urine had been passed for 36 hours.

With great difficulty the hand was introduced into the uterus, and it was found that the polypus was attached by a thick pedicle to the right side of the fundus of the womb.

The descent of the polypus was awaited until Oct. 2d, when the pains having continued, without any further advance of the tumour, hemorrhage recurring, and the patient being very much exhausted, and fearing the consequences of the repeated forcible introductions of the catheter, Dr. McDowell, with the approbation of Drs. Caruthers and Waltz, produced complete *inversio* uteri, by forcibly extracting the tumour; the pedicle was then divided, and the polypus amputated. It was 9 inches in length, and 17 inches in its greatest circumference, and of a semi-cartilaginous structure.

There was no tendency to spontaneous readjustment of the uterus, and the inversion was therefore reduced by the hand. On Oct. 12th the patient was quite well, having exhibited no untoward symptom.

Dr. McDowell, after detailing this case, enquires: "May not this be a safer, as well as a more expeditious mode of extirpating polypus uteri generally? I was emboldened to practice the plan at the suggestion of M. Baudelocque. The result inclines me to claim for it a preference generally, when polypi are attached near the fundus uteri, to groping in darkness and uncertainty with the ligature and canulæ." (*Op. cit.* p. 207.) In support of the recommendation, Dr. McDowell cites cases which had come under his observation, in which operations for polypus had terminated fatally in consequence of portions of the uterus having been included in the ligature.

Like many of your subscribers in this section, I have been much gratified by the interest which you evince in the history of medicine in Virginia, and in your efforts to exhume from an almost unexplored past, memorials of those who have reflected credit on the medical profession of our State. It is this that has induced me to call your attention to the services of Dr. McDowell, who, at a comparatively recent date, earned for himself by his writing, and still more by his skill and judgment in practice, a right to honorable mention among the surgeons of Virginia.

Dr. McDowell contributed largely to the periodical medical literature of his day. I have in my possession an essay which he published in 1828, "*On the Pathology of the Bones,*" in which views are inculcated in reference to the treatment of periostitis, necrosis, and caries which are far in advance of the notions generally entertained at that period. It is useless to recapitulate opinions which are now universally received, and which derive their only interest from the date at which they were promulgated. I do not propose, therefore, to analyse Dr. McDowell's essay. I may notice, however, his manner of treating white swellings and wounds of large joints, from which he freely evacuated pus, admitting air, if it must needs be so, in preference to confining matter. This practice, though sanctioned by the best surgeons, has not yet become general.

Dr. McDowell concludes his essay with the report of a case in which he removed the entire sixth and seventh ribs on the right side, detaching them from their vertebral articulations without wounding the dorsal nerves, or intercostal arteries. In two months the patient (a woman of 20 years) was able to undertake a journey, and was relieved of the distressing cough and symptoms of hectic under which she had been rapidly declining.

I feel very confident that if materials could be accumulated for a retrospective review of medicine in Virginia, it would be demonstrated that many therapeutical improvements and doctrinal truths, which are now accredited elsewhere, originated among our own professional predecessors. You have yourself, sir, shewn by extracts from his writings, how Dr. McClurg foreshadowed the discovery of Bernard of the production of sugar in the liver, and have commented on his remarkable prediction of the disappearance of pure inflammatory gout.

I hope others will imitate your example, and give us reminiscences of Currie, Selden, Foushee, Siccory, and others whose memories we should cherish. Such biographical sketches, though less gratifying to individual vanity, would certainly be more acceptable to the profession at large than the portraits of contemporaneous dignitaries, whose contributions to science will elude the researches of future antiquarians; for, though they may be great, they are far from being generally known, at least in

BOTETOURT.

M. Luchet relates the following anecdote in the *Siècle* newspaper:

"A wealthy merchant, noted for his avarice, had stone in the bladder, and an operation was inevitable. After postponing it for a long time, not from fear of the pain, but from unwillingness to pay the fee, he sent one of his sons to Paris, to make a bargain with one of the big-wigs, limiting him to four hundred dollars. The surgeon who was selected demanded twelve hundred.—Go, Sir, said the son, we will make up the amount in the family.—they set out on the journey (the distance was forty miles), the surgeon learned the relations between the millionaire and his children, and perceived that he had no security for the eight hundred dollars above the offer. They reached the house. The master was respectfully waited on by the solemn doctors of the place. He saluted them and the patient with his grand air, and commenced his functions. When he had strapped and bandaged the victim securely: so, said he,—Sir, my charge is twelve hundred dollars; I am in the habit of taking my fee in advance.—The patient remonstrated; but what was the use? He gave the key, swearing in a dozen languages, for he had traveled forty years. The notes were brought, the surgeon counted them, pocketed them, and commenced. He operated to perfection, as he always does; and, as the sons were attending him to the door, quite awe-struck:—Your father, said he, is a rascal, but you are good boys; here are the eight hundred dollars, for which you intended to stint yourselves. I lend them to you; you can return them when you choose; your father has learned that I am not to be bargained with."

It is said that the instinct of self-preservation is the strongest feeling of the human breast; physicians know the contrary. With the miser, the fear of losing his gold predominates over everything, survives everything. Molière and Balzac have but half completed this chapter in the history of the human passions. If a number of physicians would record the illustrations of avarice which have occurred to them in their medical life, then indeed, we might hope to possess a perfect portraiture of this odious vice.

Some months ago, I met an old lady, very wealthy and quite alone in the world, who had already lost one eye from purulent opthalmia, which she had allowed to run its course without sending for a surgeon. She complained to me of her remaining eye, which was injected, watery, and apparently threatened with some grave inflammation.—Why don't you send for a doctor? You doctors are so expensive, she replied;—then, after a pause:—I have been advised to see Dr. Norris.—Good, said I.—Or Dr. Littell.—Excellent.—Or Dr. Hays.—You can't do better.—But they charge a dollar at least?—Those gentlemen are very charitable to the poor, but they expect their fee from the rich, of course.—I am not rich, she rejoined; I'll go to see a doctor, but I'll wear my old bonnet and shawl?

I put my Philadelphia brethren on their guard against this rich pauper, who is well able to remunerate their talent and science.

I knew another of the same stamp, whom I was fortunate enough to carry through a severe attack of pneumonia. Instead of a fee she sent me a single bottle of wine. She *couldn't bear* to speak to me of money, she said, because I was the friend of her pastor.

I once prescribed for a member of the legislature; he, too, was very rich, and as miserly as Gobseck. I ordered a cough-mixture, which was to be taken by the table-spoonful, every hour. The next day the remedy had produced no effect, and I asked to see the bottle which should have been nearly empty. It was two-thirds full.—Why, Sir, said Gobseck, this syrup cost seventy-five cents. I wanted to make it last. I took it only every other hour, and in a teaspoon instead of a tablespoon.

The most striking example of this sort which I ever witnessed, was that of an husband, who had lost his wife, whom he loved tenderly, and regretted and grieved for as much as a miser can love, regret, or grieve for anything. As they were placing the defunct in her coffin, the husband approached the bier, as I and the bystanders thought to take a last farewell, we were deceived, however. He turned to the undertaker and said: this coffin is six inches too long, and the cord is cotton, you are robbing me, you scoundrel!

I think, after this, we may dismiss the subject.

PharmaSeutical versus PharmaKeutical.

The long disputed pronunciation of this word has been lately settled in a peremptory manner by the highest legal authority in Great Britain.

In a suit lately brought before the "Court of Queen's Bench," sitting at Westminster, Lord Chief Justice Campbell presiding, as to the qualifications required to become a member of the "Society of Pharmaceutical Chemists of Great Britain."

Lord Campbell said, there appeared to be one vexed question which he should like to have decided; as some gentlemen pronounced the "c" soft, but others treated it as hard. He would ask the Attorney General what *he* said it was.

The Attorney General said, in his opinion, it was soft. It came from the Greek; but when it became English, it must be subject to the English rules; but he had been cautioned by some of his learned friends as to the mode of pronouncing it.

Sir Fitzroy Kelly, the counsel for the prosecution, said, of course he should bow to the opinion of his learned friends who were so much superior to him in learning, as in everything else.

The Attorney General replied, that was rather too bad, as Sir F. Kelly had himself cautioned him.

Sir F. Kelly said, whatever his lordship should say it was, that would be the mode to be adopted.

Lord Campbell. "Then let it be *soft*. Be it so."

So "the softs" carried the day before his lordship the Chief Justice Campbell, and threw their adversaries, "the hards," for costs and damages.

Law and Medicine.

We notice in the Edinburgh Monthly Journal, a very good blow struck at those scientific philanthropists, who justify every murder and exculpate every criminal, upon the plea of insanity. Such persons, in truth, offer premiums to the bloodiest butchery, for the more horrible the act committed, the more positive is the belief in the *expert's* mind that an irresponsible insanity exists. Thus a man who kills his wife, has rather a difficulty in saving his neck—but the one who kills wife and children is perfectly secure; whilst the third, if he includes his father and mother in the tragic deed, is not only spared at once, but is held up to the pity and sympathy of the public. The extract alluded to from the Belfast Whig says:

"One of the most horrible abuses in the practice of the law, is when a man has been proved to murder another by repeated beatings, to allow an eccentric physician to come forward and confuse the jury, by swearing that the victim died of some disease with a curious Greek or Latin name. We have been present at a trial where one man killed another by tightening and twisting his neckcloth, and yet a medical gentleman swore that in his opinion the murdered man died of what he called 'spinal apoplexy,' which might be true in the same way that all people, whether murdered or not, die of want of breath."

Industrial Pathology.

The British Society of Arts, desirous of promoting the physical welfare of that large class of artizans whose daily avocations expose them to various deleterious agencies, appointed a committee to take this important subject into consideration, and with a view of drawing public attention more pointedly to this great social question, Dr. King Chambers consented to read a paper at the Society of Arts on "Industrial Pathology, or the Accidents and Diseases incident to different industrial occupations." A short summary of this interesting paper we insert below.

Corporeal labourers are both shorter lived and endure more physical evils than the mental labourers. There are two distinct classes of evils to account for this. In the first are included poverty, ignorance, political weakness, and other circumstances which prevent handicraftsmen surrounding themselves with the defences against pain and death placed in the power of their superiors. 2ndly, causes arising out of the nature of various descriptions of bodily exposure and exertion. Here lies the field for industrial pathology. The first class depend mainly on the work not being sufficiently regular or plentiful, or being underpaid, or some such economical mismanagement; the second is aggravated by abundance; the more a man has to do the worse he fares. To illustrate this. There are two coal-whippers at a time of a commercial crisis in the coal trade; fewer hands are wanted; one gets turned out of work, and the other is kept on. In six months the one out of work is starving, because so weakened by temporary want of food that he was not fit for employ when he could get it. The other man has worked as hard as possible, jumping up a foot or two, and throwing his whole weight on to a rope for ten or twelve hours a-day,—the most wasteful, unscientific, and pernicious expenditure of human muscle ever devised. The consequence is, that his heart cannot stand it, the fibres are overstrained with these continued violent jerks, and the organ becomes diseased. And thus the industrious, well-paid man dies at forty. Here industrial pathology comes into play. It is the duty of that science to find out why such and such labour is injurious in a special manner, and to suggest a remedy. Painters, again, are liable to colic and palsy from the use of white lead: we may introduce a substance equally convenient, in the shape of white zinc or other substitutes. Tailors sit all day in a confined atmosphere, with the legs crossed and the spine bowed, so that neither the ribs nor the digestive organs have room to act. The consequence is, that the stomach and bowels become disordered, the spine twisted, the gait shambling, and the power of taking the exercise necessary to health obliterated. With a life embittered by indigestion, what wonder that a tailor takes to opium, gin, and tobacco, the only thing that makes existence endurable? Now, cannot these evils be corrected? The problem is to invent some sort of table which would be equally convenient. Shoemakers and bootmakers suffer equally from a constrained position, and also from the pressure of the last against the stomach. Heartburn and painful digestion are so common, that a certain pill in the Pharmacopœia (the pilula sagapeni comp.) is called the coblers' pill. "A patient of mine, now in St. Mary's Hospital, has a hollow big enough to put one's fist in, from the pressure inwards of the breast-bone by the boot-tree; of course his lungs and heart are diseased by such distortion. Cannot some one devise a new sort of boot-tree, which will not drive its tap-roots into people's lungs? Looking-glass makers and water-gilders are constantly coming into Hospitals for mercurial paralysis: and when they go out of the Hospital they are not fit for much else than the workhouse. There are two ways of remedying this; one, to give them protection against the poisonous fumes; the other to improve and cheapen rival modes of gilding and silvering, in which mercury is not used. Washerwomen constantly suffer from varicose veins and other mechanical disorders arising from the standing posture. It is the business of industrial pathology to devise a chair in which they could work as at present, or else to discover some mode of doing the same thing by the agency of mechanics, which is now done immediately by the unaided body to wear out mechanism instead of muscle, iron instead of energy. I show you here a rotton jaw-bone, which Mr. Simon was obliged to cut out of a man's head, because it was corroded by the noxious fumes evolved in the manufacture of lucifer matches. It is to be hoped that there is some mode of making them without rotting men's jaws, and this mode it is the business of industrial pathology to find out." Other illustrations were given. After entering upon the reason why the Society should particularly give time and attention to the subject, the next consideration was, how the Council proposed to be of use in the matter; and, after offering various valuable suggestions, Dr. Chambers illustrated this portion of his subject, by mentioning among other preventives, guards for the organs of sense of the individual workman—such as will not interfere at all with present modes of manufacture, but simply defend the artizan from injuries. As examples, he had placed on the table a few articles referrible to this class sent by Mr. Pillischer, of Bond-street. They consist of defences for the eyes against the effect of light, and mechanical injury; and if a third of the contrivances that are furnished are as simple and rational as these, it will indeed be fortunate.

VARIETIES.

Influence of the Physician.—"How many thousand faces must have passed before the doctor's eyes; how many pitiable tales of woe must have been poured into his ears; what awful secrets must find a repository beneath that black satin waistcoat! We may lie to the lawyer, we may lie to the confessor, but to the doctor we cannot lie. The murder must out. The prodigal pressed for an account of his debts will keep one back; the penitent will hide some sin from his ghostly director; but from the doctor we can hide nothing, or we die. He is our greatest master here on earth. The successful tyrant crouches before him like a hound; the scornful beauty bows the knee; the stern worldly man clings desperately to him as the anchor that will hold him from drifting into the dark sea that hath no limits. The doctor knows not rank. The mutilated beggar in St. Celsus's accident ward may be a more interesting case to him than the sick duchess. He despises beauty—there may be a cancer in its bloom. He laughs at wealth; it may be rendered intolerable by disease. He values not youth; it may be ripe for the tomb, as hay for the sickle. He makes light of power; it cannot cure an ache, nor avert a twinge of gout. He only knows, acknowledges, values, respects two things—Life and Death."—*Household Words.*

Ervalenta and Revalenta.—An Englishman, named Warton, sold in Paris for many years a remedy for constipation, and, when he died, his daughter, Miss Julianna Warton, continued the trade. Latterly, a formidable rival has threatened to annihilate the popularity of the *Ervalenta Warton.* Invented by Christian Klug, a Swede residing in London—loudly bepuffed in England, and largely consumed in America—the *Revalenta Arabica* made its triumphal entry into Paris. Thereupon Mademoiselle Warton summoned the proprietors of the *Revalenta* to appear before the Tribunal of the Seine, where she had preferred a charge against him of vending a product similar to her own under a different designation. For this infraction of her right she demanded the bagatelle of 200,000 fr. The tribunal ordered Christian Klug to suppress the title *Revalenta,* and reduced the damages to 1000 fr. We have noticed this little war between two products which Miss Warton justly describes as *similar,* without feeling any partiality for one or the other. The Revalenta is to the Ervalenta as bean-flour is to bean flower, (*ervum, lens,* pulse, bean). The public may continue to buy of Klug or Miss Warton indifferently, and to justify the aphorism announced the other day in the Champs Elysees by a classical charlatan: *Vulgus vult decipi, et decipiatur.*—*Jour. des Conn. Med.*

A druggist in great vogue among the homœpathists of London, was lately detected (*in flagrante delicto*) in the very act of taking snuff while engaged in his pharmaceutical ceremonial. It is even suspected that the wretch had *sneezed* on the medicinal substances he was dynamizing! This event has produced an immense sensation in the United Kingdom, notwithstanding the oriental pre-occupations of the moment. All the want of success of the globulists during the past year is now explained. We have not learned the fate of the culpable apothecary, but an homœpathic assembly, comprising the most notorious knaves of England, Scotland, and Wales, has decided unanimously, that in future drugs shall be obtained from a sworn *pharmacien* of the homœpaths of Paris.—*Revue Medicale.*

The Hero of Silistria.—That gallant young Englishman, Butler, who was pronounced by Omar Pasha the hero of Silistria, lost his life, in all probability, for want of proper surgical advice. He was struck by a spent Minie ball in the forehead, which wounded the scalp only. He was stunned at the time; but was at his work on the following day. In a short time, however, he became delirious, and death was the result. His case was one of those described by Pott, and the trepan might have saved him. Before his death the Sultan had conferred upon him the highest military honors.

Died—At Hollis, N. H., William Hale, M. D , æt. 92. Dr. Hale entered the medical staff of the army of the Revolution when 15 years old, served three years, and then practiced in his native town for nearly two thirds of a century.

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1. That a medal or some suitable testimonial not to exceed fifty dollars in value, be awarded annually by the society, for the best Essay upon some Medical Subject.

2. That a committee of three be appointed to examine all Essays that may be offered, and select the one worthy of such medal or testimonial.

At a meeting of the society, held in April 1854, on motion of Dr. Atkinson, it was resolved that the subject of the next Prize Essay should be *Pneumonia*, and the president of the society was directed to appoint a committee of three to award the premium.

In order to carry out the above resolutions, the president of the society has appointed the undersigned a committee to examine such Essays as may be offered on the subject of pneumonia. All communications must be addressed to the chairman of the committee. They must be accompanied by a sealed note, containing the name of the writer, and bearing upon its face a motto corresponding to the one prefixed to the Essay.

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